D4

DIGITAL RECORDER

Owner's Manual

KORG

USB

REMS

CE

Precautions

Location

Using the unit in the following locations can result in a malfunction.

- In direct sunlight
- Locations of extreme temperature or humidity
- Excessively dusty or dirty locations
- Locations of excessive vibration
- Close to magnetic fields

Power supply

Please connect the designated AC adapter to an AC outlet of the correct voltage. Do not connect it to an AC outlet of voltage other than that for which your unit is intended.

Interference with other electrical devices

Radios and televisions placed nearby may experience reception interference. Operate this unit at a suitable distance from radios and televisions.

Handling

To avoid breakage, do not apply excessive force to the switches or controls.

Care

If the exterior becomes dirty, wipe it with a clean, dry cloth. Do not use liquid cleaners such as benzene or thinner, or cleaning compounds or flammable polishes.

Keep this manual

After reading this manual, please keep it for later reference.

Keeping foreign matter out of your equipment

- Never set any container with liquid in it near this equipment. If liquid gets into the equipment, it could cause a breakdown, fire, or electrical shock.
- Be careful not to let metal objects get into the equipment. If something does slip into the equipment, unplug the AC adapter from the wall outlet. Then contact your nearest Korg dealer or the store where the equipment was purchased.

THE FCC REGULATION WARNING (for U.S.A.)

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

Unauthorized changes or modification to this system can void the user's authority to operate this equipment.

CE mark for European Harmonized Standards

CE mark which is attached to our company's products of AC mains operated apparatus until December 31, 1996 means it conforms to EMC Directive (89/336/EEC) and CE mark Directive (93/68/EEC).
And, CE mark which is attached after January 1, 1997 means it conforms to EMC Directive (89/336/EEC), CE mark Directive (93/68/EEC) and Low Voltage Directive (73/23/EEC).
Also, CE mark which is attached to our company's products of Battery operated apparatus means it conforms to EMC Directive (89/336/EEC) and CE mark Directive (93/68/EEC).

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Introduction

Thank you for purchasing the ***KORG D4 Digital Recorder***. In order to take full advantage of the D4 and enjoy trouble-free operation, please read this manual carefully. After you have read this manual, please keep it for future reference.

Main features

The D4 is a digital multi-track recorder that uses "CompactFlash" as its recording and storage medium.
The D4 lets you record individual tracks using a guitar, keyboard, mic, or other instruments, and then mix your tracks into a completed song — all without requiring any additional equipment. The D4 also contains a full complement of Editing tools such as copy, delete, expansion, compression and more.

CompactFlash

CompactFlash provides a convenient and reliable media format for recording and archiving your data. This solid-state media requires no bulky drive mechanism, keeping the D4 quiet and portable. You can also use the USB connector to send the recorded data to your computer.

Virtual tracks

The D4 has four recording / playback tracks. Each track provides 8 virtual tracks. These virtual tracks give you the equivalent of 32 tracks (4 tracks × 8) of multi-track recording.

Effects

The built-in effect unit features Korg's "*REMS*" modeling technology, and contains 100 different effect programs created by professional musicians and engineers. You can also save 100 of your own original effect programs in the user area.

Rhythm patterns

Metronome and PCM rhythm patterns are provided as reference and to enhance your recordings.

Additional features

The D4 provides other functions such as a tuner and assignable locate points to meet your recording needs.

Printing conventions in this manual

[ ]: Keys, and knobs on the panel of the D4 are enclosed in [square brackets].
“ ”: Parameters that appear in the display are enclosed in double quotation marks.
Steps ① ② ③ ...: Steps in a procedure are indicated as ① ② ③ ...
→p.■■: This indicates a reference page.
, note: These symbols indicate cautions or advice.

Display screens in this manual

The parameter values appearing in the display screens printed in this manual are only examples, and may not be the same as what appears in the display of your D4.

About your data

The contents of memory may be lost if an unexpected malfunction occurs, so be sure to make a backup of any important data. Korg Corporation can take no responsibility for any damages due to loss of data.

COPYRIGHT WARNING

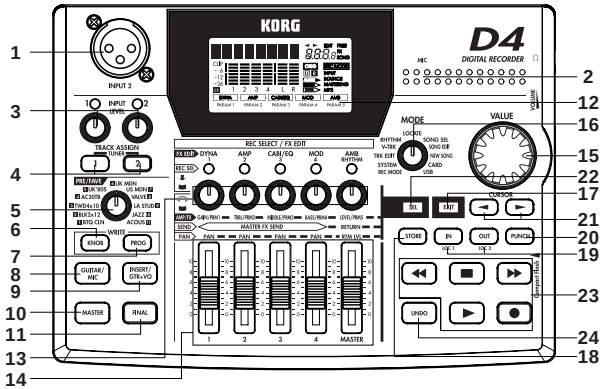
This professional device is intended only for use with works for which you yourself own the copyright, for which you have received permission from the copyright holder to publicly perform, record, broadcast, sell, and duplicate, or in connection with activities which constitute “fair use” under copyright law. If you are not the copyright holder, have not received permission from the copyright holder, or have not engaged in fair use of the works, you may be violating copyright law, and may be liable for damages and penalties. If you are unsure about your rights to a work, please consult a copyright attorney. **KORG TAKES NO RESPONSIBILITY FOR ANY INFRINGEMENT COMMITTED THROUGH USE OF KORG PRODUCTS.**

What is *AI*EMS ?

*AI*EMS (Resonant structure and Electronic circuit Modeling System) is KORG’s proprietary sound modeling technology which precisely reproduces the complex character and nature of both acoustic and electric instruments as well as electronic circuits in real world environments. *AI*EMS emulates a wide variety of sound generation characteristics including instrument bodies, speakers & cabinets, acoustic fields, microphones, vacuum tubes, transistors, etc.

Features of the D4 and their function

1. Top panel



1. [INPUT 2] mic input jack

You can connect a mic to this balanced XLR jack. If you use this jack, set the rear panel [INPUT 2] switch to “EXT (MIC).”

2. MIC (internal mic)

3. INPUT LEVEL [1], [2] knobs

These knobs adjust the level of the inputs. The optimal setting is the highest level that does not cause the LEDs to light.

You may hear hum or noise if you raise the INPUT LEVEL [1], [2] knob levels when nothing is connected to the input jacks.

4. TRACK ASSIGN [1], [2] keys

These keys assign are used to assign the signal from the [INPUT 1] and [INPUT 2] jacks to tracks. The [INPUT 1] jack corresponds to the TRACK ASSIGN [1] key, and the [INPUT 2] jack corresponds to the [2] key. When you press one of the TRACK ASSIGN keys, that key will light. Next, press the [PAN] knob corresponding to the destination track. Both the REC SELECT LED and TRACK ASSIGN keys will light, indicating the input jack is assigned to that track.

TUNER

To access the Tuner mode, press the TRACK ASSIGN [1], [2] keys simultaneously. The tuner function lets you tune an external instrument. Since the effects are bypassed in Tuner mode, this provides a way for you to compare the sound with the effects on or bypassed.

note The Tuner function will not operate during playback or during record-standby.

5. [PRE / FAVE] (favorite) knob

Turn this knob to select the effect you want to use. You can register your eleven favorite effects to this knob, and select them simply by turning the knob. When the D4 is shipped from the factory, the eleven effects printed on the panel are the effects assigned to this knob. To assign your own favorites, refer to “Step 7. Using effects” in the Operation section.

6. FX WRITE [KNOB] key

Press this key to register a favorite effect to the [PRE / FAVE] knob.

7. FX WRITE [PROG] key

After you've edited an effect, press this key to save your custom settings.

8. FX [GUITAR / MIC] key

Press this key to apply an insert effect to the input as it's being recorded. If this key is lit, the effect is being applied. If you press the lit key, the effect will be bypassed. If you press and hold the key, the effect will turn off.

Only one track can be recorded at a time when you're using this effect.

9. FX [INSERT / GTR+VO] key

Press this effect if you want to apply a dual-input insert effect (to process the sound while it's being recorded), for example when using stereo input or when recording a guitar and vocal duo. If this key is lit, the effect is being applied. If you press the lit key, the effect will be bypassed. If you press and hold the key, the effect will turn off.

10. FX [MASTER] key

Press this key if you want to apply a send / return master effect during playback or when bouncing or mixing tracks. If this key is lit, the effect is being applied. If you press the lit key, the effect will be bypassed. If you press and hold the key, the effect will turn off.

11. FX [FINAL] key

Press this key if you want to apply a final effect during playback or when bouncing or mixing tracks. If this key is lit, the effect is being applied. If you press the lit key, the effect will be bypassed. If you press and hold the key, the effect will turn off.

12. Display

This area displays recording and playback level meters, time information (locate), page information, and various other parameters.

13. [PAN] knobs (REC SELECT / FX EDIT)

These knobs adjust the panning of each track and the rhythm level. Depending on the selected mode and the [SEL] key, you can also press these knobs to switch the status of each track between playback and recording. When editing an effect, pressing down on each knob will select a specific block within the effect chain.

14. Faders

These adjust the volume levels. A fader position of about "7" on the scale is unity level (recording and playback will be at the same level). At this time, an indication of "-U-" will briefly appear in the value indicator.

1, 2, 3, 4

These faders adjust the volume level of each track. For tracks not selected for recording by "REC SELECT," the faders adjust the playback volume level. For tracks selected by "REC SELECT," the faders adjust the recording level of the input signal.

MASTER

This fader adjusts the volume level of the master L / R

bus. During playback, the sound is output from the [MASTER OUT] jacks at the volume specified by this fader. If you've selected "BOUNCE," "MASTERING," or "MP2" as the "REC MODE," this fader adjusts the overall recording level of the tracks selected by "REC SELECT."

15. [VALUE] dial

Use this to select parameters or edit their values. Pressing down on this dial has the same result as pressing the CURSOR [►] key.

16. [MODE] knob

Use this knob to select a specific mode. (→p.24)

17. [EXIT] key

This key returns you to a specific page for each mode or page. Press it to cancel the selected operation when editing (i.e., when the "EDIT" indication is lit), or to return from Effect or Tuner mode to the mode selected by the [MODE] knob.

18. [STORE] key

Press this key to register a specific point in the song (time location) to the [IN (LOC1)] or [OUT (LOC2)] (locate point) keys. When renaming a song, press this key to assign the name and store the song. For details on how to register a time location, refer to "3. Using locate points to change the time" in "Step 5. Viewing and changing the time" of the Operation section.

19. [IN (LOC1)], [OUT (LOC2)] (locate point) keys

Pressing these keys moves the song to their stored time location. After pressing the [STORE] key, press one of these keys to store the current time location to that key. In the auto-punch record mode (the [PUNCH] key will be lit), recording will automatically begin and end (punch-in / out) at the times specified by these keys. The times registered to these keys are also used for track editing ("TRK EDIT" mode) and for auto-punch recording (See "Step 3. Re-recording a specified time region of a track: Auto punch-in / out.") For details on how to register a time location, refer to "3. Using locate points to change the time" in "Step 5. Viewing and changing the time" of the Operation section.

20. [PUNCH] key

This key turns auto-punch recording on / off.
On (key lit): Auto-punch recording .
Off (key unlit): Conventional recording.
For details on using auto-punch recording, refer to "Re-recording a specified time region of a track: Auto punch-in / out" in "Step 3. Recording" of the Operation section.

21. CURSOR [◄], [►] keys

Use these keys to move between pages in the display. The key(s) will light to indicate the direction(s) in which it is possible to move.

22. [SEL] key

Use this key to select the function of the [PAN] knobs. The display shows the currently selected function.

23. TRANSPORT keys

Use these keys to operate the recorder (e.g., play, record).

PLAY

This plays the currently selected song.

If you've used the [REC SEL] keys to select a recording track, press the [REC] key and then press the [PLAY] key to begin recording.
The [PLAY] key will remain lit during playback or recording.
If you press this key during playback, the playback will slow down to half-speed - without changing the pitch - making it easy to play along with a difficult phrase as you practice.
While setting the In, Out, To, or End times in track editing, you can press this key to play back approximately two seconds from that time location.

REC

Pressing this key will arm the D4 for recording (record-ready mode). The key will blink. In order to enter record-ready mode, you need to press the [PAN] knob(s) for the track(s) you wish to record - the selected track's LED will light. When you then press the [PLAY] key, the key will light and recording will begin.

STOP

This key stops the recording or playback; the recorder will stop.
If you press this key while already stopped, the song will be saved and you will return to the beginning of that song.

REW (Rewind)

This key moves to the beginning of the song. If you press and hold this key during playback, the time location will move rapidly toward the beginning of the song.

FF (Fast Forward)

If you press and hold this key during playback, the time location will move rapidly toward the end of the song.

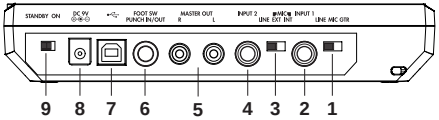
24. [UNDO] key

Use this key to undo the most recent recording or track editing operation, or to cancel the Undo operation (i.e., "redo")
After performing a recording or editing operation, you can press the [UNDO] key to return to the state prior to executing that operation.

note In order to use this function, the "SYSTEM" mode "UNDO" page setting "AutoUndo" must be turned "On."

Undo information is preserved until you perform the next recording or track editing operation.

2. Rear panel



1. [INPUT 1] switch

Set this switch for the type of device connected to the [INPUT 1] jack.
GTR: Use this setting if you've connected a guitar or bass guitar.
MIC: Use this setting if you've connected a mic.
LINE: Use this setting if you've connected a line-level

device (e.g., the output of a keyboard or effect processor).

2. **[INPUT 1] jack**
   You can connect a guitar, bass, or keyboard to this monaural phone jack.

3. **[INPUT 2] switch**
   Set this switch for the type of device connected to the [INPUT 2] jack.
   (MIC) INT: Use this setting if you're using the D4's internal mic.
   (MIC) EXT: Use this setting if you're using the [INPUT 2] jack at mic level. This is appropriate for a mic input.
   LINE: Use this setting if you're using the [INPUT 2] jack at line level. This is appropriate for a line-level device. In this case, you can't use the top panel [INPUT 2] mic input jack.

4. **[INPUT 2] jack**
   You can connect a line-level device (e.g., the output of a keyboard or effect processor) here. You can also use this with the [INPUT 1] jack for stereo input. This is a monaural phone jack.
   When you use this jack, you can't use the top panel [INPUT 2] mic input jack.

5. **[MASTER OUT] jack**
   These jacks output the stereo audio signal. Connect the D4 to your external monitor system or recording equipment via these RCA-style jacks.

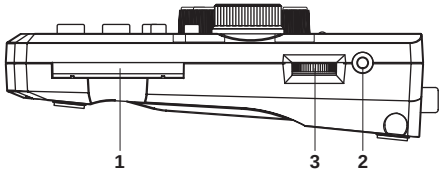
6. **[PUNCH IN/OUT] jack**
   You can connect a pedal switch (sold separately: PS-1) to this jack for perform punch-in/out recording.

7. **[USB] connector**
   Use a USB cable to connect the D4 to your computer. (→p.53)

8. **[DC 9V] connector**
   Connect the included AC adapter to this connector.

9. **[POWER] switch**
   This switches the D4 between On and standby.

3. Side panels

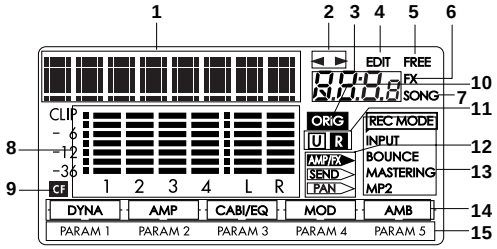


1. **CARD slot**
   Insert CompactFlash media into this slot.

2. **[PHONE] jack**
   Connect a pair of stereo headphones to this 1/8" mini-phone jack.

3. **[PHONE LEVEL] knob**
   This knob adjusts the volume level of the headphones.

4. Display screen



1. Page parameter display / Location counter display

This area displays the current time location and parameter information.

2. Page guide display

This area shows in which direction you can move (using the [CURSOR] keys) to access additional pages.

3. Value display

This area shows the value of the parameter being edited, or information regarding the page or program.

4. EDIT icon

This icon will be shown when it is possible to use the [VALUE] dial to edit the value of the selected parameter.

5. Free icon

This icon is shown when the value display is indicating the remaining space on the card.

6. Fx icon

This icon is shown when the value display is indicating the number of the currently selected effect and its effect chain.

7. Song icon

This icon is shown when the value display is indicating the number of the currently selected song and the grade (recording quality) of that song.

8. Level meter

This area indicates the input / recording and output / playback level of each track.

9. Card access icon

This icon is shown when data is being written to or read from the CompactFlash card.

Never turn off the power when the card access icon is displayed. Doing so may destroy not only the currently selected song, but also the data in the card as well as the card itself.

10. Original value icon

When the current value of the parameter being edited is the same as its stored value, the “ORIG” icon will appear.

11. Undo / Redo icons

These icons will appear when the undo / redo functions are available.

12. [PAN] knob icon

These icons indicate the current function of the [PAN] knobs.

13. Record mode icon

These icons indicate the current recording mode. Set the [MODE] knob to “REC MODE” and use the [VALUE] dial to select the appropriate recording mode.

INPUT: The input signal will be recorded. This is the normal recording mode.

BOUNCE: In the BOUNCE recording mode, up to three tracks of playback and one external input can be bounced (mixed) down to one track; or you can chose to have two tracks of playback and two external inputs to be bounced down to two tracks.

MASTERING: In the MASTERING recording mode, all four tracks of playback can be mixed down onto one or two of the tracks.

MP2: In this mode, four tracks of playback will be converted to a two-track MP2 stereo file (without overwriting the existing four tracks).

14. Effect chain

This icons in this area indicate the on / off status of each of the modules in an effect chain.

15. Effect parameters

These icons will appear to indicate that editable parameters exist for the selected effects. Use the [PAN] knobs to edit these parameters. The indicator for the parameter currently being edited will blink.

Connections

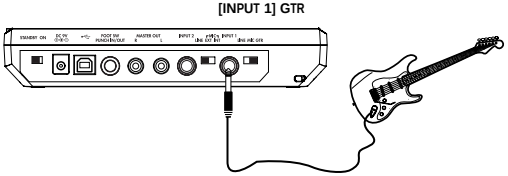
The diagram below shows basic connections for the D4. Adapt these instructions as appropriate for your equipment, and make the necessary connections.

The power must be turned off while you make connections.

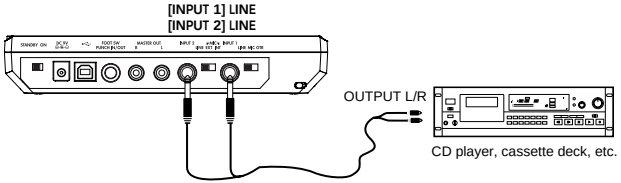
1. Input

Set the [INPUT 1] and [INPUT 2] switches appropriately for the input device you've connected. (→p.11)

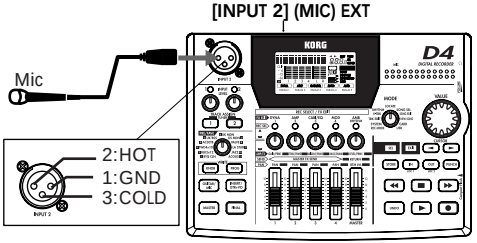
Connecting a guitar



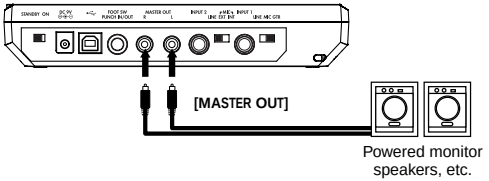
Connecting a line-level device



Connecting a mic (to the XLR jack)



2. Output



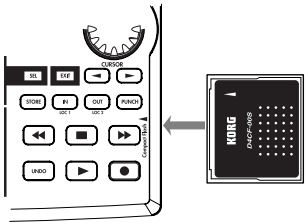
Inserting or removing a card

In order to record on the D4, you will need a Compact-Flash card (which we'll refer to simply as a "card" in this manual).

1. Inserting a card

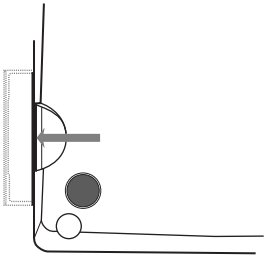
Insert the card with the label facing upward. Firmly push the card all the way into the card slot.

Be careful to insert the card in the correct direction.



2. Removing a card

Grasp the ridge located on the underside of the card, and pull it out toward yourself.



Never insert or remove the card while the power is on. Doing so may damage the card.

The card may be damaged if you use excessive force when inserting or removing it.

Cards that can be used with the D4

The D4 can use CompactFlash cards of capacities ranging from 16 MB to 2 GB. Never attempt to use any other type of CompactFlash card, since this may cause the D4 to stop working.

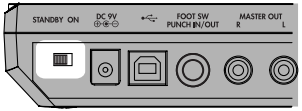
Card handling

Do not bend the card, or subject it to strong physical shock or high temperatures.

Switching the power on / standby

1. Preparing to turn on the power

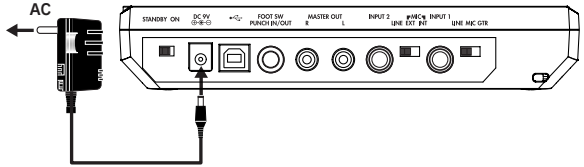
Before you connect the power supply, make sure that the [POWER] switch is set to the STANDBY position.



Connecting the AC adapter

Plug the connector of the included AC adapter firmly into the [DC 9V] input connector. Then connect the AC adapter to an AC power outlet.

Never use any AC adapter other than the included one.



2. Turning the power on

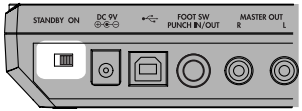
Here's the correct way to turn on the power of the D4 and any other connected devices.

① **Lower the [MASTER] fader to 0.**
Also lower the volume of any connected external devices to the minimum setting.

② **Turn on the power of any connected external devices.**
Turn on the power of external input devices such as a keyboard that will be sending audio to the D4.

③ **Turn on the power of the D4.**
Turn the [POWER] switch on.

note The song that had been selected when the power was last turned off will be selected.



The start-up screen will appear in the display.

note If the start-up screen does not appear when you turn on the power, check the following points.

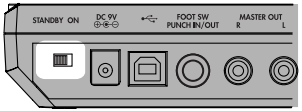
- AC adapter is connected, and CompactFlash card is inserted in the correct direction

④ **Turn the on the power of any external output devices such as your audio monitor system.**

3. Switching the power off

Make sure that operations such as song playback or recording are completed, and turn off the power by reversing the “Turning the power on” procedure from the previous page.

Before you power-off, you must press the [STOP] key to save the song to the card.



Turn the volume of all connected devices to the minimum setting, and turn off each power switch in order, beginning with the last device that receives the audio signal.

Never turn off the power when the card access icon is displayed. Doing so will destroy not only the selected song, but may also destroy the songs on the card as well as the CompactFlash itself.

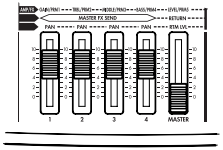
Listening to the demo songs

The included card contains demo songs. Here's how you can listen to these demo songs.

① **Connect headphones or a monitor amp to the D4. (→p.15)**

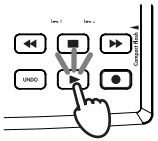
② **Turn on the power of the D4. (→p.17)**

③ **Set the [TRACK] fader of the D4 to 7, and the [MASTER] fader to 0.**



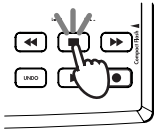
④ **Select the song that you want to play back.**
(→p.28: Step 2 "2. Selecting a different song")

⑤ **Press the [PLAY] key to begin playback.**



⑥ **Slowly raise the [MASTER] fader to adjust the volume level.**
If you are using headphones, raise the [MASTER] fader to about **6**, and then use the [PHONE LEVEL] knob to make adjustments.

⑦ **When the demo song has finished playing, press the [STOP] key to stop playback.**



Demo song list

"BOA BLUES"

Written and performed by Rob Math
© 2004 KORGinc. -all rights reserved."Duck Teeth"

Setting

	Tr1	Tr2	Tr3	Tr4
PAN	L5	R25	Center	Center
FADER	85	85	85	85
FINAL EFFECT		P63: Room_RV		

Quick start

If you just can't wait to get started, this section will explain how to connect your guitar, record your playing on one track, and then play it back.

1. Preparations

1 *Insert the card*

Insert the card (CompactFlash) into the card slot. (→p.16)
The CompactFlash card that came with your D4 is already formatted and contains the demo songs. However, if you are using a new CompactFlash card, you will need to format it before you begin recording. (→p.55)

note If you format the CompactFlash card that was included with the D4, you will lose all the demo data (demo song and effect data) that it contained.

2 *Connect your guitar*

Connect a shielded cable (mono phone plug) to your guitar. Connect the other end of the cable to the D4's [INPUT1] jack.
Set the D4's [INPUT1] switch to **GTR**.

3 *Connect your headphones*

Connect your headphones to the D4's [PHONE] jack. Set the [PHONE LEVEL] knob to **0**.

note If you want to connect an amp or audio system, refer to p.15.

2. Turn the power on

1 *Connect the AC adapter*

Connect the included AC adapter to the [DC 9V] jack.

2 *Set the [MASTER] fader to "0"*

Lower the D4's [MASTER] fader.

3 *Turn the power on*

Turn on the [POWER] switch located on the rear panel of the D4, and the start-up screen will appear in the display.

3. Create a new song

1 Set the [MODE] knob to “NEW SONG”

note If no songs have been recorded on the card, then “MakeNew!” will appear automatically.

2 Specify the song grade

The display indicates “SngGrade.”
Use the [VALUE] dial to select the grade (recording quality) of the new song you’re going to create.

3 Create the song

Press the CURSOR [►] key. An empty song named “NEW SONG” has now been created.

4 Press the [EXIT] key

The D4 will be in Play mode.

4. Assign the input

1 Press the TRACK ASSIGN [1] key

The key will light.

2 Select the recording track

By default, track 1 is automatically selected as the recording track; the TRACK ASSIGN [1] key and REC SELECT [1] LED will light. If you want to select a track other than track 1 as the recording track, press the [PAN] knob corresponding to that track to select it.

3 Set the input level

Adjust INPUT LEVEL [1] as you watch the LED. Set the level as high as possible without letting the LED light red.

4 Set the monitoring level

Gradually raise the [TRACK 1] fader as you watch the level meter [1], and make sure that you are hearing sound. Use the [MASTER] fader and [PHONE] knob to adjust the monitor volume.

5. Select an effect

1 *Press the [GUITAR/MIC] key*

The guitar/mic effects will appear.

2 *Use the [VALUE] dial to select an effect program*

Play your guitar to hear the sound.

3 *Edit an effect module*

Press the [PAN] knob for one of the effect modules within the selected effect chain, and then turn the [VALUE] dial to select that effect module. You can turn the [PAN] knobs to edit the value of the parameters in that module.

4 *Press the [EXIT] key*

You will return to Play mode.

6. Record

1 *Adjust the recording level*

Use the [TRACK 1] fader to adjust the recording level. While you watch level meter [1], gradually raise the fader as far as possible without allowing the level to reach CLIP. Use the [MASTER] fader and [PHONE] knob to adjust the monitor volume.

2 *Arm the D4 for recording*

Press the [REC] key to put the D4 into record-ready mode. The [REC] key will blink.

3 *Record!*

When you are ready to perform, press the [PLAY] key. Recording will start, and you may begin playing your instrument. During recording, the [REC] key and [PLAY] key will be lit.

4 *Stop recording*

When you're finished performing, press the [STOP] key. Recording will stop, and the [REC] key and [PLAY] key will go dark.

7. Playback

1 *Press the [REW] key*

The time location will return to the beginning of the song.

2 *Disarm the recording track*

If the [REC SELECT] LED of the track you specified as the recording track in “4. Record” is still lit, press the [PAN] knob corresponding to that track again, and the LED will go dark.

3 *Listen to the recording*

Press the [PLAY] key. Playback will begin. During playback, the [PLAY] key will be lit.
Use the [MASTER] fader to adjust the volume.

4 *Stop the playback*

To stop playback, press the [STOP] key. Playback will stop, and the [PLAY] key will go dark. To listen again, repeat steps 1–4.

Step 1. Basic operation

This section explains basic operation of the D4.

1. Selecting modes

The functions of the D4 are organized into eleven modes selected by the [MODE] knob; and four sub-modes (Effect, Effect Write, Tuner, and Punch-Rec) accessed by pressing to various keys.
You can access one of the sub-modes from any mode simply by pressing the corresponding key. If a sub-mode is selected, you can press the [EXIT] key to return to the mode currently selected by the [MODE] knob.

Play mode

This is the default mode that the D4 will enter when you first turn the power on. Here you can play back and record a song. The display shows a counter.

Modes selected by the [MODE] knob

Turn the [MODE] knob to select a mode. If you turn the [MODE] knob while a sub-mode is selected, The D4 will enter the newly selected mode after you exit the sub-mode.

REC MODE (Record Mode)
This mode is used to specify the recording mode (e.g., bounce or stereo MP2 conversion).

SYSTEM
This mode is used to make basic settings for the recorder.

TRK EDIT (Track Edit)
This mode is used to perform track editing operations such as Copy or Erase.

V-TRK (Virtual Track)
This mode is used to select virtual tracks.

RHYTHM
This mode is used to specify the tempo and to select rhythm and metronome patterns.

LOCATE
In this mode, you can move to a different time location within the song.

SONG SEL (Song Select)
Use this mode when you want to select a different song.

SONG EDIT
This mode is used to perform song editing operations such as Name, Copy, and Delete.

NEW SONG
Use this mode when you want to create a new song.

CARD
This mode is used to perform card-related operations.

USB
This mode is used to exchange data with your computer via USB.

Sub-modes

Effect
Press the FX [GUITAR / MIC], [INSERT / GTR+VO], [MASTER], or [FINAL] key to enter the Effect sub-mode in order to select or edit effects. The key that you selected will be lit, and this will determine the location at which the effect is inserted and the effect types that are available.

Write
Press the FX WRITE [KNOB] key or the [PROG] key to access the Write sub-mode. The [KNOB] key lets you register the selected effect to the Favorites knob. The [PROG] key lets you rename an effect and write it into the D4's internal memory.

Tuner

Press the TRACK ASSIGN [1] key and [2] key simultaneously to access the Tuner sub-mode. Next, use the TRACK ASSIGN [1] key or [2] key to select the input ([INPUT 1] or [INPUT 2]) signal that you want to send to the tuner.

Punch Rec

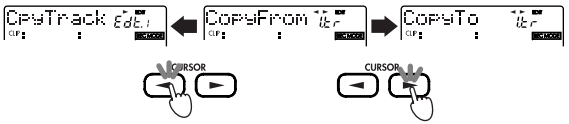
Press the [PUNCH] key to select the Punch Rec sub-mode if you want to use auto-punch recording. Auto-punch recording will occur from the time location specified by the [IN (LOC1)] key to the time location specified by the [OUT (LOC2)] key.

2. Selecting and editing parameters

Selecting a parameter

After you've selected a mode using the [MODE] knob, use the [CURSOR] keys to move to the page containing the parameter that you wish to edit.

The page guide indication shows whether more pages exist in each direction. To move to another page, press the [CURSOR] key for that direction.



Editing a parameter

If the displayed page contains a parameter whose value you can edit, the value display will blink and the edit icon will appear. Turn the [VALUE] dial to edit the parameter.

Using the [PAN] knobs to select / edit parameters

The [PAN] knobs can be used to edit the value of certain parameters.
Use the [SEL] key to switch the function of the [PAN] knobs. An icon in the display indicates the parameter that can currently be edited.
AMP/FX: If you press the FX [GUITAR+MIC], [INSERT / GTR+VO], [MASTER], or [FINAL] key, the [PAN] knobs will edit effect parameters 1–5.
SEND: If you press the [SEL] key to select SEND (and the [MASTER] key is lit), the [PAN] knobs will control the master sends and return.

If you use the [PAN] knobs to edit parameters in this way, the physical position of the [PAN] knobs will no longer match the actual panning of each track.

Canceling an edit (Undo / Redo)

After performing a track editing operation, you can use the Undo function to return to the condition prior to executing the edit. If the undo icon " U " is shown, you can press the [UNDO] key to execute the Undo function. After undoing, the Redo icon " R " will light, and you can use the same operation to Redo the edit, returning to the condition prior to executing Undo.
The Undo / Redo function also provides a convenient way to compare the original version to the edited version, allowing you to be sure the edit delivered the result that you wanted.

note In order to use this function, the System mode "UndoSys" page setting "AutoUndo" must be turned "On." (→p.57)

Undo is maintained until the next time you record or perform a track editing operation.

3. Tuning

The D4 has a built-in tuner function. This lets you tune an instrument that is connected to the [INPUT 1] or [INPUT 2] jack, or tune an instrument using the internal mic.

Tuning your guitar

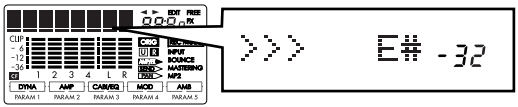
① **Connect your guitar to the [INPUT 1] jack.**
Set the [INPUT 1] switch to GTR.

② **Enter Tuner mode.**
Press the TRACK ASSIGN [1] key and [2] key simultaneously.

③ **Verify the input.**
The [INPUT 1] LED will blink.

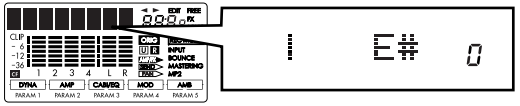
note If the input level is too low, adjust the INPUT LEVEL [1] knob.

④ **Tune your instrument.**
Make sure that your guitar is connected to the [INPUT 1] jack, and play a string on your guitar. The character display area of the screen will function as a tuning meter, and will display the note name.



Tune the string while watching the amount of tuning difference (displayed in units of cents) and the meter in the display.
The reference pitch frequency is A=440 Hz.

When the tuning is correct



note If you do not want the sound to be heard while tuning, set the [MASTER] fader to **0**.

⑤ **Exit Tuner mode.**
Press the [EXIT] key to exit Tuner mode.

Tuning your acoustic guitar

Here's how you can use the D4's internal mic to tune your acoustic guitar.

① **Select the internal mic.**
Set the [INPUT 2] switch to (MIC) INT.

② **Enter Tuner mode.**
Press the TRACK ASSIGN [1] key and [2] key simultaneously.

③ **Select the input.**
Press the TRACK ASSIGN [2] key. The [INPUT 2] jack will be selected, and its LED will blink.

note If the input level is too low, adjust the INPUT LEVEL [2] knob.

④ **Tune your instrument.**

⑤ **Exit Tuner mode.**
Press the [EXIT] key to exit Tuner mode.

Step 2. Creating / selecting a song

1. Creating a new song

Before you can begin recording, you must create a new blank song.

① **Set the [MODE] knob to "NEW SONG."**

② **Select the song grade.**
The display will indicate "SngGrade."
Use the [VALUE] dial to select the song grade (recording quality) that's appropriate for the desired recording quality and / or time.

Eco(Economy)	Extended-length recording. Select this when you want to record for an extended time.
Std(Standard)	Standard. Normally you will select this grade.
Hiq(High Quality)	High audio quality. Select this when you want to record at a high audio quality. The available recording time will be shorter.

The song grade that you select here cannot be changed after the song is created.

③ **Create the song.**
After you've used the [VALUE] dial to select the song grade, press the CURSOR [►] key. A song named "NEW SONG" will be created following the highest existing song number.

note If you decide not to create a new song, press the [EXIT] key.

2. Selecting a different song

To select the previous-numbered song

Hold down the [STOP] key and press the [REW] key to move to the beginning of the next lower-numbered song.

To select the next-numbered song

Hold down the [STOP] key and press the [FF] key to move to the beginning of the next higher-numbered song.

To select a song directly by name or number

① **Set the [MODE] knob to "SONG SEL".**
The name and number of the currently selected song is displayed.

② **Use the [VALUE] dial to display the desired song name and number.**

③ **Press the CURSOR [►] key to select the song.**

When you switch songs, each track will be at the volume level at which the faders were when you switched songs. Depending on the state of the faders, the playback volume might be excessive, so please use caution.

3. Changing the name of a song

The default name for any newly created song will be "NEW SONG." So that you will be able to tell your songs apart, we recommend that you change the song name. A song name of up to **16 characters** can be assigned.

Characters available for a song name

(Space), A...Z, a...z, 0...9, @, +, −,
!, #, $, %, ', (,), {, }, _, `

To change the name of a song

① **Select the song whose name you want to change.**
→"2. Selecting a different song"

② **Set the [MODE] knob to "SONG EDIT".**

③ **Use the [VALUE] dial to select "NameSong."**

④ **Press the CURSOR [►] key to access the song renaming page.**
The character you're editing will blink.

⑤ **Use the [VALUE] dial to edit the song name.**
The character will change as you turn the [VALUE] dial. To move to a different character to change, press the CURSOR [◄]/[►] keys.

⑥ **When you are finished entering the name, press the [STORE] key.**
The display will ask "NameOK?," Use the [VALUE] dial to select "Yes," and then press the CURSOR [►] key. If you select "No," the previous name will reappear.

Step 3. Recording

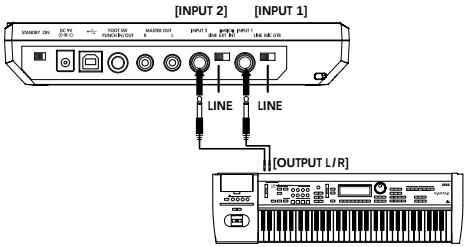
1. Recording methods

This section explains the different recording methods available on the D4.
For basic recording, refer to "Quick Start."

Recording on two tracks

Here's how to record on two tracks simultaneously.

① **Connect the input device.**
Lower the D4's [MASTER] fader, set the [INPUT 1] and [INPUT 2] switches both to LINE, and connect your keyboard etc. to the [INPUT 1] and [INPUT 2] jacks.



② **Specify the two tracks on which you want to record.**
Press the TRACK ASSIGN [1] key; the key will light. Press one of the [PAN] knobs to select a track for recording. Using the same procedure, press the TRACK ASSIGN [2] key and select another recording track.

note If you press and hold a TRACK ASSIGN key, the REC SELECT LED of the currently selected track will light.

note You can also listen to rhythm while you record. (→p.43)

note If you're in Effect mode, press the [EXIT] key to return to Play mode before specifying the recording track. If the [GUITAR/MIC] key is lit, you can record on only one track at a time.

③ **Check the input level.**
While watching the INPUT LEVEL LED, produce sound on your keyboard (or other input device) and adjust the INPUT LEVEL [1] knob. Adjust the level as high as possible without allowing the LED to light. Adjust the INPUT LEVEL [2] knob in the same way.

note You can also apply an effect to the input source. (→p.37)

note To listen to the sound that is being input, raise the [TRACK] faders and the [MASTER] fader to about 6.

④ **Set the recording level.**
Use the [TRACK] faders to adjust the recording level. Watch the level meter, and slowly move the fader up as high as possible without allowing the signal to reach CLIP. Use the [MASTER] fader and [PHONE LEVEL] knob to adjust the monitor volume.

⑤ **Set the current time to the location from which you want to begin recording.**
If you want to begin recording at a different time location, use the [MODE] knob to select "LOCATE" mode.

⑥ **Verify the tracks that are set to record.**
Make sure that the REC SELECT LEDs are lit for the tracks you want to record. If they are not lit, return to step ②.

⑦ **Press the [REC] key to enter record-ready mode.**
The [REC] key will blink.
The value display indicates the amount of time available for recording.

⑧ **Begin recording.**
When you're ready, press the [PLAY] key. The D4 will start recording, and you can begin performing on your instrument. During recording, the [REC] key and [PLAY] key will be lit.

⑨ **Stop recording.**
When you're finished performing, press the [STOP] key. Recording will stop, and the [REC] key and [PLAY] key will go dark.

2. Additional recording

Using virtual tracks to record

The D4 is a four-track recorder, but each track has 8 virtual tracks (A–H). You can record on any of the virtual tracks.

① **Select the virtual track on which you will record.**
Use the [MODE] knob to select "V-TRK" mode. Use the CURSOR [◄]/[►] keys to select a track number, and use the [VALUE] dial to select a virtual track.

② **Adjust the recording level of your input device, and record.**
Refer to "1. Recording methods" steps ①–④.

Overdubbing — listening to the playback while you record another track

The technique of listening to the playback of previously-recorded tracks while you record another track is called "overdubbing." For example, this can be used when you

want to listen to previously-recorded backing tracks while you record a lead guitar performance.

① **Select the track that you want to record.**
When you press the TRACK ASSIGN [1] or [2] key, the key you pressed will light. Press one of the [PAN] knobs to select the recording track. Raise the [TRACK] faders of the tracks you want to hear play back as you record.

② **Adjust the recording level of the input source, and press the [PLAY] key.**
You can practice your performance while listening to the previously-recorded tracks, just as if you were actually recording. Adjust the level of your input source (instrument), and practice playing and working out your musical ideas until you are ready to actually record.

note If you can't hear the input source, go to "SYSTEM" mode and in "MixerSys," press the CURSOR [►] key to turn "AutoIn" Off. (→p.57)

③ **Start recording.**
Press the [REC] key. When you're ready, press the [PLAY] key to begin recording. Press the [STOP] key when you are done.

note If you need to move to a different time location, use the "LOCATE" mode.

Punch-in/out — re-recording a portion of a track

If you make a mistake in one part of your recorded performance, or if you are not happy with a certain part of your performance, you can re-record just a specific portion of the track without having to re-record the entire track from the beginning, or without having to play through to the end of the track.

note "Punch-in" is the action of switching the song from playback mode to record mode, and "punch-out" is the action of switching from record mode back to playback mode.

① **Adjust the recording level of the input source.**
Refer to "1. Recording methods" steps ①–④.

② **Set the "AutoIn" parameter to "On."**
Use the [MODE] knob to select "SYSTEM" mode, and use the [VALUE] dial to select "MixerSys." Press the CURSOR [►] key and use the [VALUE] dial to turn the "AutoIn" parameter "On." This will set the "automatic input switching" monitor feature on.

note When "AutoIn" is "Off," you will always hear the input sound of the track being recorded. If this is turned "On," the sound recorded on that track will play back during playback, and during recording this will automatically switch to the sound of the assigned input source. (→p.57)

Turn the [MODE] knob to return to "LOCATE" mode.

③ **Set the time to a location slightly earlier than the point where you want to begin recording. (→p.35)**

④ **Connect a pedal switch (PS-1, sold separately) to the [PUNCH IN/OUT] jack.**

note If you don't have a pedal switch, you can punch-in/out manually; proceed to step ⑤.

⑤ **Press the [PLAY] key to begin play back.**
You will be listening to the playback of the previously recorded tracks, including the playback of the track that you will be punch-recording.

⑥ **Press the pedal switch at the point where you want to start recording.**
Recording will start (manual punch-in). Now you will

be listening to the sound of the external input source.

note If you don't have a pedal switch, press the [REC] key at the point where you want to start recording.

⑦ **Press the pedal switch at the point where you want to stop recording.**
Recording will end, and the track will switch back to playback (manual punch-out). Now you will be listening to the playback of the track.

note If you don't have a pedal switch, press the [REC] key at the point where you want to stop recording.

⑧ **Press the [STOP] key to stop playback.**
Now you can listen to the playback of the entire track. If you are not satisfied with the results, you can press the [UNDO] key and try again.

Auto Punch-In / Out — Re-recording a pre-specified region of the track

There is also a way to automatically punch-in and punch-out without having to manually press a key or step on a pedal switch at the desired moment. This is convenient iff you're recording a performance (such as guitar) that requires both hands.

① **Specify the time location where you want to begin recording.**
Set the [MODE] knob to "LOCATE." Then use the play and stop operations to move to the desired location. In this mode, you can also press the CURSOR [►] key to make the counter display blink and use the [VALUE] dial to specify the time location where you want to begin recording. Press the [STORE] key; the key will light. In this state, pressing the [IN (LOC1)] key will store the current time location as the punch-in point (the time location at which recording will automatically begin).

② **Specify the time location where you want to stop recording.**
Using the same procedure as in the previous step, set the counter to the location where you want to stop recording. Press the [STORE] key; the key will light. In this state, pressing the [OUT (LOC2)] key will store the current time location as the punch-out point (the time location at which recording will automatically end).

③ **Press the [PUNCH] key.**
When this key is lit, the auto punch-in / out function is on. The display will indicate "RollTime." Use the [VALUE] dial to specify the roll time (the length of the audio playback that will occur before recording begins, specified as a number of measures). Set this to "0" if you want to begin recording immediately, or to about "2" if you need some playback time to get ready.

④ **Press the [REC] key to put the D4 in record-ready mode.**

⑤ **Begin Auto-Punch In / Out recording.**
When you're ready, press the [PLAY] key to begin recording. Playback will begin earlier than the punch-in point as specified by the roll time, and recording will begin automatically when you reach the punch-in point. When you reach the punch-out point, recording will end and the track will automatically resume playback.

⑥ **Press the [STOP] key to stop playback.**

note If desired, you can press the [UNDO] key to return to the state prior to recording. (→p.26)

3. Combining multiple tracks

There are two methods for combing multiple tracks that have already been recorded onto a single track or a stereo pair of tracks: Mastering and Bounce recording. These operations will free up more tracks so you can continue adding (recording) new tracks. Mastering is generally used when you are ready to make a final stereo mix. Bounce recording can mix previously recorded tracks together with an external input source as the D4 records.

Combining tracks 1–4 onto two tracks — Mastering

① **Select "Mastering" as the "REC MODE" mode.**
Set the [MODE] knob to "REC MODE."
Use the [VALUE] dial to select "Mastering."
Press the [EXIT] key to return to "Play" mode.

② **Arm the recording tracks.**
Press the [PAN] knobs that correspond to the tracks you want to record (tracks 1 and 2). The REC SELECT LEDs for those tracks will light.

③ **Adjust the pan of the playback tracks.**
Press the [PLAY] key to begin play back, and adjust the stereo position (pan) of the recorded tracks (1–4).

note If you are using only one recording destination track, set the pan to the far right if you are bouncing to track 1 or 3, or to the far left if you are bouncing to track 2 or 4. In this case, the monitor sound will also be panned all the way to one side, which is inconvenient for listening while you record. To prevent this from happening, turn the "AutoPan" setting "On." The panning of the bounce source tracks will automatically be set appropriately for the bounce destination, and the monitor sound will also be automatically panned to the center. If you are using two recording tracks, this setting will be ignored. Pan to "L" if the recording track is odd-numbered, or to "R" if the recording track is even-numbered. (→p.57)

④ **Return to the beginning of the song.**

⑤ **Adjust the playback and recording levels.**
Use the track faders to adjust the playback level, and use the master fader to adjust the recording level.

⑥ **Begin recording.**
Press the [REC] key to put the D4 in record-ready mode. Then press the [PLAY] key to begin recording.

⑦ **When you're finished recording, press the [STOP] key.**

Combining three tracks and an external source onto one track — Bounce recording

① **Select "Bounce" as the "REC MODE" mode.**
Set the [MODE] knob to "REC MODE. "
Use the [VALUE] dial to select "Bounce."
Press the [EXIT] key to return to "Play" mode.

② **Select the track that you want to record.**
Press the [PAN] knob that corresponds to the track you want to record (track1). The REC SELECT LED for that track will light.

③ **Begin recording.**
Follow the same procedure described in steps ③–⑦ of "Combining tracks 1–4 onto two tracks — Mastering," from the previous page, and play your instrument (external source) during recording.

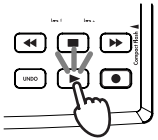
Step 4. Playback

This section explains basic various playback features available on the D4.

1. Playback

① **Select the song that you want to play back, and set the time location.**
To select a song, set the [MODE] knob to "SONG SEL", and then use the [VALUE] dial to display the desired song's name and number. Press the CURSOR [►] key to select the song.
You can begin play back at a time location other than the beginning of the song. To change the time location, set the [MODE] knob to "LOCATE" and press the CURSOR [►] key to make the counter display blink. Use the [VALUE] dial to set the time. location.

② **Listen to the playback.**
Press the [PLAY] key. The key will light, and the counter will begin moving. Use the [TRACK] faders to adjust the volume of each track. Use the [MASTER] fader to adjust the overall volume of the song. (→p.36)



③ **Stop playback.**
Press the [STOP] key. The key will go dark.

Double-speed playback

During playback, you can press and hold the [FF] key to play back at double speed.
During playback, you can press and hold the [REW] key to play back in reverse at double speed.

Half-speed playback

During playback, you can press and hold the [PLAY] key to play back at half-speed.

2. Playback extras

In addition to the playback methods described above, you can also add effects or listen to the internal rhythms during play back. For details, refer to the pages listed below.

- Apply effects to the sound being played back. (→p.37)
- Play internal rhythms along with the playback. (→p.42)

Step 5. Viewing and changing the time location

This section explains how to use the counter display, how to use locate points, and how to select a different time location within a song.

1. Changing the format of the counter display

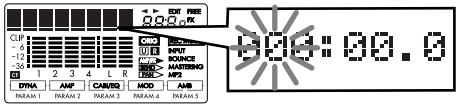
The counter display format shown in Play mode can be switched according to your needs. You can switch between the following two time display formats.

- 00:00.00 type — "minutes": "seconds" . "1/1000 second"
- 001.1.00 type — "measures" . "beats" . "1/96 beat"

Set the [MODE] knob to "Locate" (Locate mode), and turn the [VALUE] dial to change the display format. (→p.62)

2. Changing the current time location

① **Set the counter display blinking.**
In the Locate or Play mode, when the counter is displayed, pressing the CURSOR [►] key will make the counter display begin to blink.



② **Use the [VALUE] dial to change the time location.**
Now turn the [VALUE] dial to change the location. To move the cursor between the various units of change, use the CURSOR [◄]/[►] keys. Moving toward the right will switch to a new screen that will allow you to move in smaller units.

note If "LocMoni" (→p.57) is turned "On," you will be able to listen to the sound as you change the time location. This can be useful for setting locate points with greater accuracy.

③ **Return to the normal Play mode.**
When you press the [EXIT] key, you will return to the initial counter mode. To move from the middle of the song to the beginning, press the [REW] key.

3. Using locate points to change the time location

You can register a specific time location as a "locate point" and then move instantly to the registered time location whenever you want. The times you register are also used for auto punch-in/out recording and for track editing.

note You can use locate points to move even while the song is playing.

Registering the IN and OUT locate points

① **Move to the time location that you want to register.**

② **Press the [STORE] key.**
The key will light.

③ **Press the key ([IN (LOC1)] or [OUT (LOC2)]) that you want to register to this time location.**
The time will be registered to that key. The registered time will be displayed briefly, and the [STORE] key will go dark.

note You can perform steps ②–③ even during playback.

note If you want to save the registered locate points as part of the song data, press the [STOP] key to save the song. If you turn off the power without saving the song, the locate points you registered will not be preserved.

Moving to the IN or OUT points you registered

Press the [IN (LOC1)] key or [OUT (LOC2)] key. You will move to that time location.

Setting the InTime and OutTime

To specify the InTime and OutTime locations used for track editing operations, you can simply register the desired time to each key as described in "Registering the IN and OUT locate points."
If you want to specify InTime and OutTime locations that are independent of the IN and OUT settings, press the lit [IN] or [OUT] key while you're in the track editing operation; the display will change to the time of that locate point. Then, in the same way as when moving the current time location, use the CURSOR [◄]/[►] keys to make the desired counter value blink, and turn the [VALUE] dial to specify the time.

note By pressing the [PLAY] key at this time, you can hear approximately two seconds of playback starting at the selected time location.

The modified time you specify here will not be reflected by the locate point.

note If you want to change the To Time or End Time for track editing operations, press the [PUNCH] key when setting the parameter.

Step 6. Mixer adjustments

By using the mixer to adjust the volume, tone, and panning for input / recording or playback of each track, you can create the most effective overall sound.

1. Select a mixer parameter

Adjusting the level (volume), and pan (stereo position)

Use the [TRACK 1]–[TRACK 4] and [MASTER] faders to adjust the levels. Use the [PAN] knobs to adjust the pan. While the recorder is stopped and the counter is displayed, moving a knob will cause its value to briefly appear.

Step 7. Using effects

The effects section of the D4 provides 93 types of effects. It contains 100 preset effect programs and 100 user effect programs that combine these effects in various ways. The preset memories contain effect programs created by professional musicians and studio engineers. The user memories can hold effect programs that you yourself create by editing the presets.

There are four types of effect programs:

guitar/mic effects: (mono insert effect)
insert/guitar+vocal effects: (two channel insert effect)
master effects: (stereo master effect)
final effects: (stereo final effect)

1. Assigning and applying effects

Using a guitar / mic effect

Use a guitar / mic effect when you want to apply an insert effect to a mono input source such as guitar, bass guitar, or mic.

① **Connect your guitar (INPUT 1) or mic (INPUT 2), and specify the track on which you want to record.**
Press the [TRACK ASSIGN] key for the input you are connected to ([1] or [2]), and that key will light. Press one of the [PAN] knobs to select the recording track. Make sure that the REC SELECT LED is lit for the recording track that you selected. For details on how to set the [INPUT 1] or [INPUT 2] switch, refer to “Rear panel.”

② **Select the guitar/mic effect.**
Press the FX [GUITAR / MIC] key ; the key will light.

note To turn it off, press and hold the key.

③ **Select an effect program.**
Turn the [VALUE] dial to select an effect program.

④ **Adjust the recording level, and record.**
Refer to “Recording methods.”

If the [GUITAR / MIC] key is lit, you can select only one track for recording.

If you’re using the internal mic, adjust the level with caution in order to avoid acoustic feedback.

Using an insert / guitar+vocal effect

Use an insert / guitar+vocal effect when you want to apply an insert effect to a stereo input source such as a stereo keyboard, line input, or if you’re singing while playing a guitar.

① **Connect your input equipment, and specify the tracks on which you want to record.**
Press the [TRACK ASSIGN] key for the first input ([1]) that you are connected to; the key will light. Press one of the [PAN] knobs to select the recording track for that input. Repeat this procedure for the other input ([2]). Make sure that the REC SELECT LEDs are lit for the recording tracks that you selected. For details on how to set the [INPUT 1] or [INPUT 2] switch, refer to “Rear panel.”

② **Select the insert/guitar+vocal effect.**
Press the FX [INSERT / GTR+VO] key; the key will light.

note To turn it off, press and hold the key.

③ **Select an effect program, and record your performance.**
Refer to steps ③ and ④ of “Using a guitar / mic effect.”

Using the master effect

One master effect processor is built into the D4, and can be applied to the tracks during playback, during "Mastering" or during "Bounce" recording. Use the "Send" (send level) of each track to adjust the depth of the effect being applied to that track. This type of effect is used mainly for spatial-type effects (such as reverb) or stereo modulation to enhance the overall depth of the song and to improve the balance.

① **Select the master effect.**
Press the FX [MASTER] key; the key will light.

note To turn it off, press and hold the key.

② **Select an effect program.**
Turn the [VALUE] dial to select an effect program.

③ **While you listen to the playback, adjust the effect return level and send levels.**
Press the [SEL] key, the "SEND" icon will appear in the display. Use the track 1–4 [PAN] knobs to adjust the send levels. Use the master [PAN] knob to adjust the return level.

Using the final effect

One stereo final effect processor is built into the D4. This effect is applied to the master L/R signal immediately before the master fader. For example you can use a dynamics-type effect program (such as a limiter) to make the overall level more consistent.

① **Select the final effect.**
Press the FX [FINAL] key; the key will light.

note To turn it off, press and hold the key.

② **Select an effect program.**
Turn the [VALUE] dial to select an effect program. Listen to the playback to hear the result of the final effect.

2. Editing an effect

You can edit any of the effect program that you have selected, for each effect type.

If you move to another mode or turn off the power without saving the edited effect, your settings will be lost. If you will want to use the edited effect again, you must execute the "Save effect" operation.

Effect programs and chains

The combination of effect modules that can be used simultaneously and the order of their connection is referred to as a "**chain**." The D4 provides eleven chains that are suitable for a variety of situations: [CHAIN A]–[CHAIN E] and [CHAIN 1]–[CHAIN 6].
The factory preset settings contain 100 effect programs, each consisting of one of these chains.
To create a custom-edited effect program, you will start with one of these factory-preset effect programs.

Selecting the effect type and chain

In order to edit an effect, you must first select an effect type and a chain.
To select an **effect type**, press one of the four FX keys: [GUITAR/MIC], [INSERT/GTR+VO], [MASTER], or [FINAL]. This selection will determine the position in the signal chain where the effect is inserted, and the type of input/output. The effect type you select also determines the type of chains that are available.

To work with a specific chain, you must begin by selecting an effect program that uses the desired chain. (→p.81)

For example if you want to edit your own program based on [CHAIN A], choose the "GUITAR / MIC" effect type, and select the preset program "ALICE". If you want to edit your own program based on [CHAIN 1], choose the "MASTER" effect type, and select the preset program "Pan-Echo."

note You can't change the chain used by each of the factory-preset effect programs.

Editing an effect

① **Select the effect type.**
Press the one of the four effect type keys (e.g., FX [GUITAR / MIC] or [INSERT / GTR+VO]).

② **Select an effect program.**
Turn the [VALUE] dial to select the effect program you want to edit. (→p.81)

③ **Select an effect module.**
Press the [PAN] knob that corresponds to the effect module you want to edit; the effect module editing screen will appear in the display.

④ **Turn the [VALUE] dial to select an effect module.**

note The number of effect modules depends on the effect type. The available effect modules are shown in the effect chain in the display. The order in which effect modules are edited may not always match the order in which the modules are connected.

⑤ **Turn the [PAN] knobs to edit the parameters.**

note The number of parameters depends on the effect module. The editable parameters are shown in the display.

note To bypass an effect, press the currently selected FX key.

⑥ **Adjust the volume of the effect.**
After making settings in step ⑤, press the CURSOR [►] to access the "ProgMVol" (effect program master volume) page. While listening to the output, use the [VALUE] dial to adjust the volume.

3. Saving an effect program

If you're happy with the results of your effect editing, you should execute the following procedure in order to save your new effect program. The effect program you've edited will not be saved automatically.

To save an effect program

As an example, here's how to edit the currently selected effect, and save it in user area number "U03" under the name you specify.

① **Edit the effect.**
Press the desired one of the four effect type keys (e.g., FX [GUITAR / MIC] or [INSERT / GTR+VO]), and edit the effect. Refer to "Editing an effect."

② **Press the FX WRITE [PROG] key.**
The name of the original effect will appear in the display.

③ **Assign a name to the edited effect program .**
The character you are currently able to edit will be blinking. Use the CURSOR [◄] / [►] keys to move to the character you want to change and use the [VALUE] dial to edit the name. When you have finished editing the name, press the FX WRITE [PROG] key once again.

note If you don't want to edit the name, simply press the FX WRITE [PROG] key.

④ **Select the user program number where you want the program saved, and save the program.**
With the display indicating "Write Num," use the [VALUE] dial to select the save-destination. For this example, select "U03" and press the CURSOR [►] key.
When the display asks "Sure?" use the [VALUE] dial to select "Yes" and press the CURSOR [►] key; your effect program will be saved to the specified number. If you select "No," you will return to the effect program select page without saving.

When you save, the edited settings will be overwritten onto that number, and the previous settings stored to that user program number will be lost.

4. Using the Favorite knob

There are eleven locations on the Favorite knob where you can register your frequently used effect programs for instant access.

Using the Favorite knob to select an effect

When the D4 is shipped from the factory, the eleven effects printed on the panel are registered to the Favorite knob.

① **Turn the knob to select an effect.**
One of the four effect type keys (e.g., FX [GUITAR / MIC]) will light. The display will show the name of the effect.

note To turn the effect off, press the effect type key (e.g., FX [GUITAR / MIC]) that's lit.

Registering an effect to the Favorite knob

① **Select the effect program that you want to register.**
You can use the Favorite knob to select an effect, or press one of the four effect type keys (e.g., FX [GUITAR / MIC]) and then turn the [VALUE] dial to select an effect program.

② **Chose a registration position on the Favorite knob**
Press the FX WRITE [KNOB] key. The display will indicate "KnobPosi." Use the [VALUE] dial to select the knob position where you want to register the effect, and press the CURSOR [►] key.

③ **Confirm the registration.**
The display will ask "WriteOK?" Use the [VALUE] dial to select "Yes," and press the CURSOR [►] key. The effect will be registered to this location.
If you want to restore the D4 to the factory-set state, use the Effect User File Load operation to load the initial data (int.eff).

5. Loading / saving an effect user file

The card used with the D4 can contain two effect user files, allowing you to load a different set of user programs as necessary. Each effect user file contains all of the user programs (U.00–U.99).

note If you want to keep the factory-set user program data, you'll need to back up the user effect file to your computer.

The file loaded at power-on

When you power-on the D4, file 1 (1.EFF) will be loaded, and when you save an effect program it will also be saved in this file.

If the card does not contain an effect user file (1.EFF), data stored in the D4 itself (the default settings) will be loaded.

note Simply exchanging cards will not change the contents of the effects.

To save an effect user file

① **Select "CARD" mode.**
Use the [MODE] knob to select "CARD" mode.

② **Select "CdFxSave"**
Use the [VALUE] dial to select "CdFxSave," and press the CURSOR [►] key.

③ **Select the number where you want the user effect file to be saved.**
The display indicates "Save Num." Use the [VALUE] dial to select the file number (1 or 2).

④ **Save the file.**
Press the CURSOR [►] key; the display will indicate "Sure?" Use the [VALUE] dial to select "Yes," and then press the CURSOR [►] key once again. If you select "No," the file will not be saved.

To load an effect user file

① **Select "CARD" mode.**
Use the [MODE] knob to select "CARD" mode.

② **Select "CdFxSave"**
Use the [VALUE] dial to select "CdFxLoad," and press the CURSOR [►] key.

③ **Select the number of the effect user file that you want to load.**
The display indicates "Load Num." Use the [VALUE] dial to select the file number (1 or 2).

④ **Load the file.**
Press the CURSOR [►] key. The display will ask "Sure?" Use the [VALUE] dial to select "Yes" and press the CURSOR [►] key once again. If you select "No," the file will not be loaded.

Initializing the effect user area

If you select "Int" in step ③ of "To load an effect user file," the same data as the preset data will be loaded into the user area, initializing these settings.

note The settings of the Favorite knob will return to their factory-set state.

This will overwrite the D4's internal user area, so if you want to save the current contents of the user area, you'll need to perform the procedure described in "To save an effect user file" before you restore the factory settings.

Step 8. Rhythm & tempo settings

This section explains how to use the rhythm and metronome patterns, how to select a time signature, and how to adjust the song's tempo setting.

note If you change the tempo after recording, the measures and beats displayed in the location counter will no longer match the audio in the track. The tempo only controls the playback speed of the rhythm patterns, and does not affect the playback speed of the recorded tracks.

1. Playing rhythm and metronome patterns

The D4 contains 87 various rhythm patterns, ranging from simple metronome patterns to more complex drums phrases designed for a particular style of music (→p.91). When you have an idea for a song and want to begin recording, you can play along with the internal rhythm patterns as a guide.

Selecting and playing a rhythm pattern

① **Select "RHYTHM" mode.**
Set the [MODE] knob to "RHYTHM." The name of the currently selected rhythm pattern will be displayed.

② **Select a rhythm pattern.**
Use the [VALUE] dial to select the desired rhythm pattern. If you select "Off," the rhythm will be off. The "Rhythm pattern list" in the appendix lists the available rhythm patterns.

note The rhythm patterns that can be selected will depend on the time signature setting.

note If the [PAN] knob icon "PAN" is displayed, you can also turn the rhythm pattern on / off by pressing the [RHYTHM] knob.

③ **Adjust the tempo.**
Press the CURSOR [►] key until the display indicate "Tempo."
Use the [VALUE] dial to adjust the tempo of the song.

④ **Specify the time signature.**
Press the CURSOR [►] key until the display indicate "Beat." Use the [VALUE] dial to specify the time signature of the song.

Changing the time signature will also change the rhythm you selected in step ②.

note To store the specified time signature and tempo in the song, press the [STOP] key to save the song. If you turn off the power without saving the song, the time signature and tempo you specified will be discarded. (→p.17)

⑤ **Adjust the volume of the rhythm.**
Press the CURSOR [►] key until the display indicate "RhythmLv." Use the [VALUE] dial to adjust the volume.

note If the [PAN] knob icon "PAN" is displayed, you can also use the [RHYTHM] knob to adjust the rhythm volume.

Recording while listening to a rhythm pattern

You can record your performance while using the internal rhythm as a guide.

① **Select a rhythm pattern.**
Refer to “Selecting and playing a rhythm pattern.” Make sure that a rhythm pattern is selected, and that the rhythm is not turned off.

② **Adjust the recording level of the input source, and record.**
Refer to “1. Recording methods.”
When you press the [REC] key and enter record-ready mode, the selected rhythm pattern will begin playing. When you press the [PLAY] key to start recording, the selected rhythm pattern will start again in sync with the beginning of the song. Play your instrument along to the rhythm.

Changing the tempo of the rhythm

Each rhythm pattern has a tempo setting stored for it. To change the tempo, select the rhythm pattern, and then edit “TEMPO” to set the tempo, as described in “3. Adjust the tempo” in the previous section.

Step 9. Song editing

The D4 provides the following editing operations for managing songs:
Renaming a song.
Copying a song.
Deleting a song.

Undo is not available for song edit operations.

1. Song editing operations

Song Name — naming a song

This operation changes the name of the currently selected song.
For the procedure, refer to “3. Changing the name of a song” in “Step 2. Creating / selecting a song.”

Song Copy — copying a song

This operation creates a copy of the currently selected song in a new location.
Here’s how to copy song “1” to song “2.”

① **Select the song (song “1”) that you want to copy.**

② **Select “SONG EDIT” mode.**
Set the [MODE] knob to “SONG EDIT.”

③ **Select the Copy operation.**
Use the [VALUE] dial to select “CopySong,” and press the CURSOR [►] key; the Copy Song page appears in the display.

④ **Select the copy destination song number ("DestSong").**
Turn the [VALUE] dial to select song "2," and press the CURSOR [►] key.

⑤ **Execute the Copy operation.**
The display will ask "Copy OK?" When you press the CURSOR [►] key, the copy operation will be executed.
When the data has been copied, the display will indicate "Finish!" After a time, you will return to step ④.

note When you execute the Copy operation, the existing songs beginning with song 2 and any subsequent songs will be renumbered by one number higher; song 3 will become song 4, etc.

Delete Song — deleting a song

This operation deletes the currently selected song.
Here's how to delete song "1."

① **Select the song (song "1") that you want to delete.**

② **Select "SONG EDIT" mode.**
Set the [MODE] knob to "SONG EDIT."

③ **Select the Delete operation.**
Use the [VALUE] dial to select "DelSong," and press the CURSOR [►] key; the Delete Song page appears.

④ **Confirm the song number ("DestSong") that will be deleted.**
Make sure that "1" is selected as the song number, and press the CURSOR [►] key.

⑤ **Execute the Delete operation.**
The display will ask "Del OK?" If you press the CURSOR [►] key, the display will ask "Sure ?," and when use the [VALUE] dial to select "Yes" and press the CURSOR [►] key, the song will be deleted. When the Delete operation is completed, the display will indicate "Finish!"

note When you execute the Delete operation, the remaining songs will be renumbered by one number lower; song 4 will become song 3 etc.

Step 10. Track editing

The D4 provides the following track editing operations:

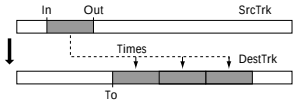
Copy Track: copies a portion a track (or the entire track)
Insert: inserts blank space into a track
Erase: erases the data from a specific area of a track
Delete: removes a specific area of a track
Expansion / Compression: expands or compresses the playback time of a track
Copy Virtual Track: copies data to a virtual track
Delete Virtual Track: deletes a virtual track

note If an error message is displayed during track editing, make a note of the content of the error message. Then press the [EXIT] key to return to the previous page, and try the editing operation once again. (→p.88: “Error messages”)

1. Track editing operations

Copy Track — copying a track

This operation copies the specified range (In–Out) of a recorded track to another time location (To).



As an example, here’s how the In–Out range of track 1 can be copied three times to the To location of track 2.

① **Store the In and Out time locations in the [IN (LOC1)] key and [OUT (LOC2)] key.**
Change the current time location to the point that you want to register, press the [STORE] key, and then press the appropriate location key. For details, refer to “3. Using locate points to change the time / Setting the IN and OUT points” in “Step 5. Viewing and changing the time.”

② **Select “TRK EDIT” mode.**
Set the [MODE] knob to “TRK EDIT.”

③ **Select the Copy operation.**
Use the [VALUE] dial to select “CpyTrack,” and press the CURSOR [►] key.

④ **Select “CopyFrom” (copy-source track number).**
Use the [VALUE] dial to select the copy-source track number. For this example, select track “1.” Then press the CURSOR [►] key.

⑤ **Select “CopyTo” (copy-destination track number).**
Use the [VALUE] dial to select the copy-destination track number. For this example, select “2.” Then press the CURSOR [►] key.

⑥ **Specify the “CpyTimes” (number of times to copy).**
Use the [VALUE] dial to specify the number of time that you want the data to be copied. For this example, select “3.” Then press the CURSOR [►] key.

⑦ **Specify the InTime (“In” time location).**
Use the [VALUE] dial to select one of the following choices. Then press the CURSOR [►] key.

toP	Beginning (time zero) of the song
LOC 1 (IN)	"In" location you specified in ①
LOC 2 (OUT)	"Out" location you specified in ①
End	Last recorded time location of the song

To use the time location you specified in Step 1, select "LOC 1 (IN)."

note You can press the [IN (LOC1)] key at this point to modify the selected time. You can also press the [PLAY] key to audition the playback for approximately two seconds starting at the selected time. Modifying the time here will not affect the time that is registered in the key. Press the [IN (LOC1)] key to return to the previous step.

⑧ **Specify the "OutTime."**
Use the [VALUE] dial to select one of the choices. Then press the CURSOR [►] key. To use the time location you specified in Step 1, select "LOC 2 (OUT)."

note You can press the [OUT (LOC2)] key at this point to modify the selected time. You can also press the [PLAY] key to audition the playback for approximately two seconds starting at the selected time. Modifying the time here will not affect the time that is registered in the key. Press the [OUT (LOC2)] key to return to the previous step.

⑨ **Specify the "ToTime."**
Use the [VALUE] dial to select one of the choices. Then press the CURSOR [►] key.

note You can press the [PUNCH] key at this point to modify the selected time. You can also press the [PLAY] key to audition the playback for approximately two seconds starting at the selected time. Press the [PUNCH] key to return to the previous step.

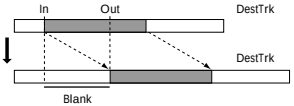
⑩ **Execute the Copy operation.**
When the display asks "Copy OK?," press the CURSOR [►] key to execute the operation. When the copy has been completed, the display will indicate "Finish!."

⑪ **Press the [PLAY] key to listen to the play back, and verify that the copy occurred as you intended.**

note You can press the [UNDO] key to return to the state prior to executing the copy track operation. (→p.26)

Insert Track "InsTrack" — inserting a blank space

This operation inserts an area of silent data into the specified region (In–Out) of a recorded track. Track data that follows the inserted blank space will be moved toward the end of the song.



As an example, here's how to insert a blank space into the In–Out region of track 1.

① **Store the In and Out time locations in the [IN (LOC1)] key and [OUT (LOC2)] key.**

② **Select "TRK EDIT" mode.**
Set the [MODE] knob to "TRK EDIT."

③ **Select the Insert operation.**
Use the [VALUE] dial to select "InsTrack," and press the CURSOR [►] key.

④ **Select "InsertTo" (track number into which you want to insert a blank space).**
Use the [VALUE] dial to select the number of the track into which you want to insert a blank space. For this

example, select “1.” Then press the CURSOR [►] key.

⑤ **Set the “In Time” and “Out Time.”**
Use the [VALUE] dial to specify each locate point. After you’ve specified the locate points, press the CURSOR [►] key. (Refer to “Copying a track”)

note You can press the [PLAY] key to hear approximately two seconds of playback starting at the selected time location.

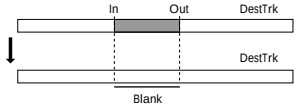
⑥ **Execute the editing operation.**
When the display asks “Ins OK?,” press the CURSOR [►] key to execute the operation. When the blank space has been inserted, the display will indicate “Finish!”

⑦ **Press the [PLAY] key to listen to the play back, and verify that the operation occurred as you intended.**

note You can press the [UNDO] key to return to the state prior to executing this operation. (→p.26)

Erase Track “ErsTrack” — erasing a track

This operation erases any recorded information from the specified region (In–Out) of a recorded track. When you erase the region, the data in that region will change to silence.



As an example, here’s how to erase the In–Out region of track 1.

① **Store the In and Out time locations in the [IN (LOC1)] key and [OUT (LOC2)] key.**

② **Select “TRK EDIT” mode.**
Set the [MODE] knob to “TRK EDIT.”

③ **Select the Erase operation.**
Use the [VALUE] dial to select “ErsTrack,” and press the CURSOR [►] key.

④ **Select “EraseTo” (track number from which you want to erase data).**
Use the [VALUE] dial to select the number of the track from which you want to erase data. For this example, select “1.” Then press the CURSOR [►] key.

⑤ **Specify the InTime (“In” time location) and OutTime.**
Use the [VALUE] dial to make your selections (see “Copy Track”). Then press the CURSOR [►] key. To use the time locations you specified in Step 1, select “LOC 1 (IN)” as the “In” time and “LOC 2 (OUT)” as the “Out” time.

note You can press the [IN (LOC1)] or [OUT (LOC2)] key at this point to modify the selected time. You can also press the [PLAY] key to audition the playback for approximately two seconds starting at the selected time. Modifying the time here will not affect the time that is registered in the key.

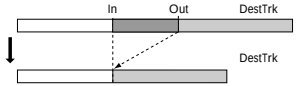
⑥ **Execute the operation.**
When the display asks “Ers OK?,” press the CURSOR [►] key to execute the operation. When the data has been erased, the display will indicate “Finish!”

⑦ **Press the [PLAY] key to listen to the play back, and verify that the operation occurred as you intended.**

note You can press the [UNDO] key to return to the state prior to executing this operation. (→p.26)

Delete Track "DelTrack" — deleting a track

This operation deletes (removes) the specified region (In–Out) of a recorded track. When data is deleted, the data following the deleted region (i.e., the data following the Out location) will be moved toward the beginning of the song.



Here's how to delete the In–Out region of track 1.

① **Store the In and Out time locations in the [IN (LOC1)] key and [OUT (LOC2)] key.**

② **Select "TRK EDIT" mode.**
Set the [MODE] knob to "TRK EDIT."

③ **Select the Delete operation.**
Use the [VALUE] dial to select "DelTrack," and press the CURSOR [►] key.

④ **Select "DeleteTo" (track number from which you want to delete data).**
Use the [VALUE] dial to select the number of the track from which you want to delete data. For this example, select "1." Then press the CURSOR [►] key.

⑤ **Specify the InTime ("In" time location) and OutTime.**
Use the [VALUE] dial to make your selections (see "Copy Track"). Then press the CURSOR [►] key. To use the time locations you specified in Step 1, select "LOC 1 (IN)" as the "In" time and "LOC 2 (OUT)" as the "Out" time.

note You can press the [IN (LOC1)] or [OUT (LOC2)] key at this point to modify the selected time. You can also press the [PLAY] key to audition the playback for approximately two seconds starting at the selected time. Modifying the time here will not affect the time that is registered in the key.

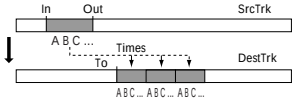
⑥ **Execute the operation.**
When the display asks "Del OK?," press the CURSOR [►] key to execute the operation. When the data has been deleted, the display will indicate "Finish!"

⑦ **Press the [PLAY] key to listen to the play back, and verify that the operation occurred as you intended.**

note You can press the [UNDO] key to return to the state prior to executing this operation. (→p.26)

Expansion / Compression — expanding / compressing a track

This operation expands or compresses the specified region (In–Out) of recorded track data, and places it in a specified location (To–End). Expansion will increase the playback time required for this region. Compression will decrease (make shorter) the playback time of this region. The data that follows the expanded / compressed data (i.e., the data following the End point) will be shifted in relation to the entire song. You can select whether or not the pitch will be converted.



As an example, here's how the In–Out region of track 1 can be converted (without changing the pitch) to the length of the To–End region of track 2, and copied there three times.

① **Store the In and Out time locations in the [IN (LOC1)] key and [OUT (LOC2)] key. The "To" time will be set later in this procedure.**

② **Select "TRK EDIT" mode.**
Set the [MODE] knob to "TRK EDIT."

③ **Select the Expansion/Compression operation.**
Use the [VALUE] dial to select "ExpTrack," and press the CURSOR [►] key.

④ **Select "ExpFrom" (source track number for the data to be expanded or compressed).**
Use the [VALUE] dial to select the number of the track whose data you want to expand or compress. For this example, select "1." Then press the CURSOR [►] key.

⑤ **Select "ExpTo" (destination track number for the expanded or compressed data).**
Use the [VALUE] dial to select the track in which the expanded/compressed data will be placed. For this example, select "2." Then press the CURSOR [►] key.

⑥ **Select "CpyTimes" (number of times the expanded/compressed data will be copied).**
Use the [VALUE] dial to specify the number of times that the expanded/compressed data will be copied. For example, select "3." Then press the CURSOR [►] key.

⑦ **Specify the InTime ("In" time location) and OutTime.**
Use the [VALUE] dial to make your selections (see "Copy Track"). Then press the CURSOR [►] key. To use the time locations you specified in Step 1, select "LOC 1 (IN)" as the "In" time and "LOC 2 (OUT)" as the "Out" time.

note You can press the [IN (LOC1)] or [OUT (LOC2)] key at this point to modify the selected time. You can also press the [PLAY] key to audition the playback for approximately two seconds starting at the selected time. Modifying the time here will not affect the time that is registered in the key.

⑧ **Specify the "ToTime."**
Use the [VALUE] dial to select one of the choices. Then press the CURSOR [►] key.

note You can press the [PUNCH] key at this point to modify the selected time. You can also press the [PLAY] key to audition the playback for approximately two seconds starting at the selected time.

⑨ **Specify the "EndTime."**
Use the [VALUE] dial to select one of the choices. Then press the CURSOR [►] key.

note You can press the [PUNCH] key at this point to modify the selected time. You can also press the [PLAY] key to audition the playback for approximately two seconds starting at the selected time.

⑩ **Select "PitchFix."**
Use the [VALUE] dial to select whether the pitch will remain the same or will change. For this example, select "Yes" to fix the pitch. Then press the CURSOR [►] key.

⑪ **Execute the operation.**
When the display asks "Exp OK?," press the CURSOR [►] key to execute the operation. When the data has been expanded/compressed, the display will indicate "Finish!"

⑫ **Press the [PLAY] key to listen to the play back, and verify that the operation occurred as you intended.**

note You can press the [UNDO] key to return to the state prior to executing this operation. (→p.26)

The amount of time required to complete this operation (the "Finish!" display) is determined by the length of the specified region (In–Out).

Copy Virtual Track "CpyV-Trk" — copying to a virtual track

This operation copies an entire virtual track (from beginning to end) to another virtual track of the same track, or to a virtual track of another track.

As an example, here's how virtual track "A" of track 1 can be copied to virtual track "B" of the same track 1.

① **Select "TRK EDIT" mode.**
Set the [MODE] knob to "TRK EDIT."

② **Select the Copy Virtual operation.**
Use the [VALUE] dial to select "CpyV-Trk," and press the CURSOR [►] key.

③ **Select "CpyFrom" (copy-source track number).**
Use the [VALUE] dial to select the copy-source track number. For this example, select "1." Then press the CURSOR [►] key.

④ **Select "CpyFromV" (copy-source virtual track number).**
Use the [VALUE] dial to select the copy-source virtual track number. For this example, select virtual track "A." Then press the CURSOR [►] key.

⑤ **Select "CpyTo" (copy-destination track number).**
Use the [VALUE] dial to select the copy-destination track number. For this example, select track "1." Then press the CURSOR [►] key.

⑥ **Select "CpyToV" (copy-destination virtual track number).**
Use the [VALUE] dial to select the copy destination virtual track number. For this example, select virtual track "B." Then press the CURSOR [►] key.

⑦ **Execute the editing operation.**
In response to the "CpyV OK?" display, press the CURSOR [►] key to execute the operation. When the copy is completed, the display will indicate "Finish!"

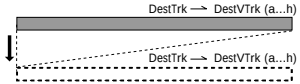
⑧ **Select "B" as the virtual track for track 1, move to the beginning of the song, and listen to the play back to verify that the copy was executed as you intended.**

note You can press the [UNDO] key to return to the state prior to executing this operation. (→p.26)

It is possible to execute this operation on a track that is not currently selected, so be sure you know which data is in the track before you execute.

Delete Virtual Track "DelV-Trk" — deleting a virtual track

This operation deletes all data (from the beginning to the end) of the specified virtual track.



As an example, here's how to delete virtual track "C" of track 1.

① **Select "TRK EDIT" mode.**
Set the [MODE] knob to "TRK EDIT."

② **Select the Delete Virtual operation.**
Use the [VALUE] dial to select "DelV-Trk," and press the CURSOR [►] key.

③ **Select "DelTo" (track number from which a virtual track will be deleted).**
Use the [VALUE] dial to select the number of the track from which a virtual track will be deleted. For this example, select track "1." Then press the CURSOR [►] key.

④ **Select "DelToV" (the virtual track that will be deleted).**
Use the [VALUE] dial to select the virtual track number that will be deleted. For this example, select virtual track "C." Then press the CURSOR [►] key.

⑤ **Execute the editing operation.**
In response to the "DelV OK?" display, press the CURSOR [►] key to execute the operation. When the data has been deleted, the display will indicate "Finish!"

⑥ **Select "C" as the virtual track for track 1, move to the beginning of the song, and listen to the play back to verify that the data was deleted as you intended.**

note You can press the [UNDO] key to return to the state prior to executing this operation. (→p.26)

It is possible to execute this operation on a track that is not currently selected, so be sure you know which data is in the track before you execute.

Step 11. Mixdown

"Mixdown" refers to the process of using the faders and effects to adjust the sound recorded on each track, and recording the resulting data on a two-channel recorder (DAT recorder, MD recorder, cassette tape recorder, etc.) to create a finished song.

1. Recording onto a master recorder

① **Check the completed song.**
Adjust the level and pan etc. of each track, and play back to check the song.

② **Connect your external recording device.**
Connect the [MASTER OUT] jack of the D4 to your tape recorder or MD recorder, etc.

③ **Begin mixdown.**
Start recording on your external recording device, and play back your song on the D4.

2. Using the sub input

If you want to perform along with the playback of the four tracks, you can use the external input as a sub input that is added directly to the master output.

① **Connect your external input device to the input jack.**

② **Select the sub input setting.**
Set the [MODE] knob to "SYSTEM." Use the [VALUE] dial to select "MixerSys," and press the CURSOR [►] key to access the mixer settings. Press the CURSOR [►] key until the display read "SubIn" (sub input set-

ting page). Use the [VALUE] dial to make the value indicator read “On.”

note If the input is monaural, it will be input to the L channel.

3. Creating a stereo MP2 file

When you have finished recording, a completed song can be converted into a stereo MP2 song file that can be played on your computer. An MP2 song that you have created this way can be played back on the D4, but there are several limitations on how it can be edited.

Limitations for a stereo MP2 song

Recording (including additions or bounce)
Track editing
Adding, changing, or editing effects
Saving mixer parameters such as Pan

note You won’t be able to use the [MODE] knob to select “REC MODE,” “SYSTEM,” “TRK EDIT,” “V-TRK,” or “RHYTHM.”

Creating a stereo MP2 file

Here’s how the audio recorded on tracks 1–4 can be converted into a stereo MP2 file.

① **Select “REC MODE” mode.**
Set the [MODE] knob to “REC MODE.”
Use the [VALUE] dial to select “CnvrtMP2” (MP2 conversion).
Press the [EXIT] key to return to Play mode.

② **Arm the recording tracks.**
Press the [PAN] knobs for the tracks (1 and 2) where you want to record. The REC SELECT LEDs will light.

③ **Adjust the panning of the playback tracks.**
Press the [PLAY] key to play back, and adjust the stereo position of each track (1–4).

④ **Adjust the playback and recording levels.**
Use the track faders to adjust the playback levels of each track. Use the master fader to adjust the recording level.

⑤ **Move the current time location to the beginning of the song.**

⑥ **Begin recording.**
Press the [REC] key to put the D4 in record-ready mode. Press the [PLAY] key to begin recording.

note The rhythm will also be recorded at this time. If you don’t need the rhythm, press the [RHYTHM] knob to turn the rhythm “Off.”

⑦ **When you’re finished recording, press the [STOP] key.**

⑧ **A new song will be created.**

note There are some limitations on how the completed stereo file can be edited.

Step 12. Saving to your computer

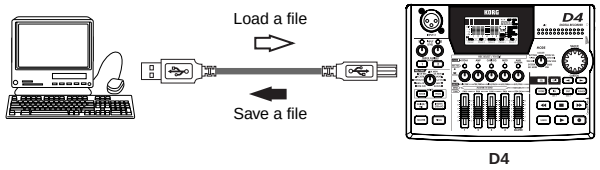
When a recording or editing operation is completed, the D4 automatically writes the data into the card. Song data saved on the card can be sent to your computer and saved (backed up).

note If there is only a little space remaining on the card, or if you’ve finished creating a song, you should save your data on a medium other than the card, such as the hard disk of your computer.

Before using a CompactFlash card, the card must be formatted by the D4 itself. Cards formatted on a computer or digital camera etc. will not be recognized by the D4.

1. Making USB connections to your computer

The D4 has a [USB] connector for direct connection to your computer, making it quick and easy to back up your important song data.



The procedure will differ according to the operating system of your computer.

Windows users

Supported versions: Windows Me / 2000 or later

① **Connect the D4 to your computer.**
Connect a USB cable to the [USB] jack of the D4. Connect the other end to your computer system. Make sure that the connector is oriented correctly, and insert it all the way into the jack.

② **Display the USB communications page.**
Set the [MODE] knob to "USB."
When the "Ready?" display appears, select "Yes" and press the CURSOR [►] key. The display will indicate "CrdReady."

③ **A drive named "Removable Disk" will be added to your computer.**
If you are connecting the D4 for the first time, the device driver will be installed now.

④ **Back up the data to your computer.**
When you open the removable disk drive that was added in step ③, you will see the contents of the Card that is inserted in the D4. Copy the desired song / effect data into your computer. Song data from your computer can also be written to the Card.

⑤ **Turn off the USB connection.**
Left-click the card icon displayed in the right side of your computer's taskbar. In the menu that appears, left-click "Stop USB disk driver (drive name)." Make sure that a message indicating that the "USB disk may be disconnected safely" is displayed. Make sure that the display has changed from "CardLock" to "CrdReady," and press the CURSOR [►] key. When the display indicates "Complete," select "Yes" and press the CURSOR [►] key. After returning to Locate mode, disconnect the USB cable from the D4.

Macintosh users

Supported versions: Mac OS 9.0.4 or later

① **Connect the D4 to your computer.**
Connect a USB cable to the [USB] jack of the D4. Connect the other end to your computer system. Make sure that the connector is oriented correctly, and insert it all the way into the jack.

② **Display the USB communications page.**
Use the [MODE] knob to select "USB." Make sure that the display indicates "Ready?" Then select "Yes" and press the CURSOR [►] key.

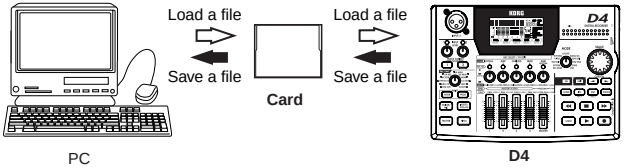
③ **A drive named “Unnamed” will be added to your desktop.**
The display of the D4 will indicate “CardLock.”

④ **Back up the data to your computer.**
When you open the drive that was added in step ③, you will see the contents of the card that is inserted in the D4. Copy the desired song / effect data into your computer. Song data from your computer can also be written to the card.

⑤ **Put the added drive into “Trash.”**
If you want to disconnect the D4, either drag the drive from the desktop into the “Trash,” or select “Exit” from the “Special” menu.
Make sure that the display has changed from “Card-Lock” to “CdNotRdy,” and press the CURSOR [►] key. When the display indicates “Complete,” select “Yes” and press the CURSOR [►] key. When you return to Locate mode, disconnect the USB cable from the D4.

2. Saving song files via card

Even if your computer does not have a USB connector, you can use a commercially available card reader to back up the data from the card.



① **Turn off the power of the D4, and remove the card. (→p.16)**

② **Insert the card as described in the manual of your card reader.**

③ **Back up the data onto your computer.**

note If data is copied to a card of a different size than the card on which the song was created, the Undo data may be lost.

Contents of the card

The root directory of the card may contain the following files and folders.

1. Song folders

The D4 manages each song as a separate folder. As a rule, the folder name will be the same as the song name, but if you create identically-named songs, the folder name will consist of the song name plus a **tilde** (˜) and **numeral**; e.g., “˜1”, “˜2.”
The folder will contain the audio data files for each track, and a song management file.

When copying a song from a card to your computer, or when writing a previously-copied song back to the card, you must copy the entire folder.
If you modify or delete part of the files in a folder, it will no longer be possible to handle the song correctly.

note If you change the name of a folder, the new folder name will be the song name. Although it is possible to use a tilde (˜) in the file name, the tilde and subsequent characters will not be displayed in the song name.

2. Stereo MP2 songs (*.MP2)

Stereo MP2 songs created by the Bounce operation are generated as stereo-format MP2 (MPEG1 Audio Layer

2) files. By copying these files to your computer, you can listen to the songs on your computer, or distribute them.

If you are using a sound card that does not support a 32 kHz sampling rate, playback may not be possible.

3. Effect user file (1.EFF, 2.EFF)

These files are created when you create or save user effect data. The filenames are "1.EFF" and "2.EFF".

4. Setting file (D4.INI)

A file containing settings is created with a name of "D4.INI". This file contains the number of the song that is currently being edited on this card.

note The presence or absence of this file will not affect the operation of the D4. If this file does not exist, the first song will be used.

5. Card Recovery result (CDRECVRY.LOG) and Format result (FORMAT.LOG)

When you execute the Card Recovery (→p.55) or Format (→p.55) operation, a file containing the result of the operation will be created.

note The operation of the D4 is not affected by the presence or absence of these files.

3. Card management

If the available capacity of the card decreases or if the data on the card becomes damaged, you can "recover" the card. If recovery is unsuccessful or if you are using a new card, you can format the card.

Recovering a damaged card: Card Recovery

① **Select "CARD" mode.**
Set the [MODE] knob to "CARD."

② **Select the Card Recovery operation.**
Use the [VALUE] dial to select "CdRecvry," and press the CURSOR [►] key.

③ **Execute the Card Recovery operation.**
When the display asks "Ready?," select "Yes" and press the CURSOR [►] key.

Formatting a card: Format

When you format a card, all the contents of that card will be erased.

① **Select "CARD" mode.**
Set the [MODE] knob to "CARD."

② **Select the Format operation.**
Use the [VALUE] dial to select "CdFormat," and press the CURSOR [►] key.

③ **Select the format type.**
When the display asks "FmtType?", use the [VALUE] dial to select the format type. Normally you should select "Std".
Select "Full" if you are using the card with the D4 for the first time, or if the card has been producing errors.

Formatting a card with the "Full" setting will take more time.

④ **Execute the Format operation.**
When the display asks "Sure?", select "Yes" and press the CURSOR [►] key. The card will be formatted.

Mode parameters

This section explains the parameters that appear in the display for each mode you select using the Mode knob.

REC MODE
Select the recording mode

Here you can select the recording mode. The mixer settings will change according to the mode you select, allowing you to execute the desired type of recording. An icon in the display indicates the recording mode you selected here.

Input: input recording

This recording mode lets you perform conventional recording.
The external input(s) assigned to the track(s) record-enabled by “REC SELECT” will be recorded.

Bounce: bounce recording

With this recording mode, the playback of the tracks you specify (together with an external audio input source) can be recorded on one or two other tracks that are record-enabled by “REC SELECT.”
For example, you might input your performance on track 1 while listening to the playback of tracks 2, 3, and 4, and record all of these sounds together on track 1. Alternatively, you could input your performance on tracks 1 and 2 while listening to the playback of tracks 3 and 4, and record all of these sounds together on tracks 1 and 2.

Mastering: mastering recording

In this recording mode, the playback of the tracks will be mixed down to the track(s) that are record-enabled by “REC SELECT.”
If you’re using all four tracks, use Mastering to combine these into two tracks or one track. You can also use Mastering to apply a master effect or final effect to two already-recorded tracks, and re-record the result onto two other tracks.

CnvrtMP2: stereo MP2 song recording

This recording mode converts a completed song into a stereo MP2 song.
If you convert a song into a stereo MP2 song, you will be able to send it to your computer and play it back using an application that is able to play MPEG1 Layer 2 files. When you execute MP2 recording, a playback-only stereo MP2 song will be newly created; the existing song will not be overwritten. The mixer will operate in the same way as for Mastering recording.

When you switch the recording mode, the TRACK ASSIGN, REC SELECT, and effect assignments will be turned off.

SYSTEM

P.1 MixerSys: Mixer settings

1. **AutoIn ..... [Off, On]**
   If this setting is on, the input source for the track(s) that are record-enabled by "REC SELECT" will be automatically switched according to the state of the recorder. When using punch recording, we suggest you turn this setting "On."
   On: For tracks selected for recording, the input will be switched automatically according to the status of the recorder:
   External input when the recorder is stopped
   Track play back when the recorder is playing
   External input when the recorder is recording
   Off: Tracks selected for recording will always use the external input.

2. **AutoPan ..... [Off, On]**
   If AutoPan is "On," pan settings will be made automatically when you bounce-record to a single track.

3. **SubIn..... [Off, On]**
   Turn SubIn "On" when you want to insert an external input directly into the master bus. Otherwise leave this turned "Off." (→p.51)

4. **LocMoni (LocateWithMonitoring) ..... [Off, On]**
   This function outputs the track playback in order to help you verify the location when you change the current time in the Locate page. The track audio of channels selected for recording will be output if "AutoIn" is "On."

P.2 Foot SW: Foot switch settings

1. **Pol: ..... [+, –]**
   This specifies the polarity of the foot switch connected to the FOOT SW jack. An "*" is displayed when you press the foot switch to turn it on.

P.3 UndoSys: Undo settings

1. **AutoUndo ..... [Off, On]**
   Select whether the Undo/Redo function will be available.
   On: Undo/Redo will be available.
   After recording or track editing, you will be able to undo/redo.
   Off: Undo/Redo will not be available.

   note If this is "On," the undo data will be erased following the next recording or track editing operation. If you turn this "On" again without performing a recording or track editing operation, undo/redo will be available.

2. **DelUndo? .....[#.S, ALL]**
   You can delete the undo data to increase the free space on the card.
   Press the CURSOR [►] key to select "Yes," and the data will be deleted.

   note Undo data that has been deleted cannot be recovered.

   #.S: Delete only the undo data of the currently selected song.
   ALL: Delete the undo data of all songs.

TRK EDIT: Track editing operations

Use these operations to edit the tracks you've recorded. These editing operations will affect the virtual track (A–H) you've selected in "V-TRK" mode for each track 1–4.

note The region of time to be edited can be specified when you execute each editing operation; however by default, the times registered to the [IN (LOC1)] and [OUT (LOC2)] keys will be used.

P.1 CpyTrack: Copy a track

This operation copies the track data in the In–Out region of the edit source track ("CopyFrom") to the To location in the edit destination track ("CopyTo") for the specified number of times.

When this operation is executed, the copy destination track ("CopyTo") will be overwritten.

1. **CopyFrom..... [1, 2, 3, 4, 1-2, 3-4]**
Select the edit source track.

2. **CopyTo .....[1, 2, 3, 4/1-2, 3-4]**
Select the edit destination track.

3. **CpyTimes.....[1...99]**
Specify the number of times the data will be copied.

4. **InTime .....**
Specify the starting time in the edit source track.
For the procedure, refer to "1. Track editing: Copying a track" in "Step 10. Track editing" of the Operation section. For details on how to register a time to the [IN (LOC2)] key, refer to "3. Using locate points to change the time location: Registering the IN and OUT locate points" in "Step 5. Viewing and changing the time location" of the Operation section.

5. **OutTime.....**
Specify the ending time in the edit source track.
For the procedure, refer to "1. Track editing: Copying a track" in "Step 10. Track editing" of the Operation section. For details on how to register a time to the [OUT (LOC2)] key, refer to "3. Using locate points to change the time location: Registering the IN and OUT locate points" in "Step 5. Viewing and changing the time location" of the Operation section.

6. **ToTime .....**
Specify the time location in the edit destination track.
For the procedure, refer to "1. Track editing: Copying a track" in "Step 10. Track editing" of the Operation section.

7. **Copy OK?..... [Yes, No]**
Select "Yes," and press the CURSOR [►] key to execute the operation.

P.2 InsTrack: Insert blank space into a track

This operation inserts an area of blank space into the In–Out region of the edit destination track ("InsertTo"). When this operation is executed, the track data that follows the inserted blank data will be shifted toward the end of the song.

1. **InsertTo.....[1, 2, 3, 4, 1-2, 3-4]**
Select the edit source track.

2. **InTime .....**
Specify the starting time in the edit source track.

3. **OutTime**.....
Specify the ending time in the edit source track.

4. **Ins OK?** ..... **[Yes, No]**
Select "Yes" and press the CURSOR [►] key to execute the operation.

P.3 ErsTrack: Erase data from a track

This operation erases the track data in the In–Out region of the edit destination track ("EraseTo").
When this operation is executed, the track data in the In–Out region will be erased, leaving silence.

1. **EraseTo**..... **[1, 2, 3, 4, 1-2, 3-4]**
Select the edit destination track.

2. **InTime** .....
Specify the starting time in the edit destination track.

3. **OutTime**.....
Specify the ending time in the edit destination track.

4. **Ers OK?** ..... **[Yes, No]**
Select "Yes" and press the CURSOR [►] key to execute the operation.

P.4 DelTrack: Delete data from a track

This operation deletes track data from the In–Out region of the edit destination track ("DeleteTo").
When this operation is executed, the track data of the In–Out region will disappear, and the track data that follows the deleted data will be shifted toward the beginning of the song.

1. **DeleteTo**.....**[1, 2, 3, 4, 1-2, 3-4]**
Select the edit destination track.

2. **InTime** .....
Specify the starting time in the edit destination track.

3. **OutTime**.....
Specify the ending time in the edit destination track.

4. **Del OK?**..... **[Yes, No]**
Select "Yes" and press the CURSOR [►] key to execute the operation.

P.5 ExpTrack: Expand/compress a region of a track

This operation expands or compresses the track data of the In–Out region of the edit source track ("ExpFrom") so that it will fit in the To–End region of the edit destination track ("ExpTo"), and copies this data the specified number of times starting at the To location. When this operation is executed, the edit destination track will be overwritten.

note There are limits on how much you can expand or compress a track. An error will occur if the In-Out time and To-End time are dramatically different from each other. You should set the To-End time so that it is within 50–200% of the In-Out time.

1. **ExpFrom**.....**[1, 2, 3, 4, 1-2, 3-4]**
Select the edit source track.

2. **ExpTo** .....**[1, 2, 3, 4/1-2, 3-4]**
Select the edit destination track.

3. **CpyTimes**.....**[01...99]**
Specify the number of times that the data will be copied.

4. **InTime** .....
Specify the starting time in the edit source track.

5. **OutTime**.....
Specify the ending time in the edit source track.

6. **ToTime** .....
Specify the starting time in the edit destination track. For the procedure, refer to "1. Track editing: Copying a track" in "Step 10. Track editing" of the Operation section.

7. **EndTime**.....
Specify the ending time in the edit destination track. For the procedure, see To Time.

8. **PitchFix**..... **[Yes, No]**
Specify whether the playback pitch will be unaffected by the expansion / compression operation.
Yes: The pitch will not be affected by the operation.
No: The pitch will change according to the degree of expansion or compression.

9. **Exp OK?**..... **[Yes, No]**
Select "Yes" and press the CURSOR [►] key to execute the operation.

note The processing time until the operation is completed ("Finish!") will be longer in proportion to the length of the specified region (In–Out).

P.6 CpyV-Trk: Copy a virtual track

This operation copies all the track data from a virtual track ("CpyFromV") of the edit-source track ("CpyFrom") to the specified virtual track ("CpyToV") of the edit-destination track ("CpyTo").

When this operation is executed, the edit destination track will be overwritten. Verify the contents of the edit destination track before you execute this operation.

1. **CpyFrom**.....**[1, 2, 3, 4, 1-2, 3-4]**
Select the edit source track.

2. **CpyFromV** .....**[A, B, C, D, E, F, G, H]**
Select the virtual track of the edit source track.

3. **CpyTo** .....**[1, 2, 3, 4 / 1-2, 3-4]**
Select the edit destination track.

4. **CpyToV**.....**[A, B, C, D, E, F, G, H]**
Select the virtual track of the edit destination track.

5. **CpyV OK?** ..... **[Yes, No]**
Select "Yes" and press the CURSOR [►] key to execute the operation.

P.7 DelV-Trk: Delete a virtual track

This operation deletes all the track data from the specified virtual track ("DelToV") of the edit-destination track ("DelTo").

When this operation is executed, the edit destination track will be overwritten. Verify the contents of the edit destination track before you execute this operation.

1. **DelTo** .....**[1, 2, 3, 4, 1-2, 3-4]**
Select the edit destination track.

2. **DelToV**.....**[A, B, C, D, E, F, G, H]**
Select the virtual track of the edit destination track.

3. **DelV OK?** ..... **[Yes, No]**
Select "Yes" and press the CURSOR [►] key to execute the operation.

V-Track

Here you can select the virtual track for each track. Each track has eight virtual tracks: "A"–"H." Select one of these virtual tracks for recording / playback on each track.

note Track editing operations other than "CpyVTrk," "DelVTrk" will affect the virtual track you select here. Other virtual tracks will not be affected by your editing operations.

note If you select a virtual track that already contains recorded data, a "O" symbol is shown beside "A"–"H." Tracks that are not yet recorded have an "-" indication.

1. **Trk1-VTr.....[A, B, C, D, E, F, G, H]**
   Select the virtual track for track "1".
2. **Trk2-VTr.....[A, B, C, D, E, F, G, H]**
   Select the virtual track for track "2".
3. **Trk3-VTr.....[A, B, C, D, E, F, G, H]**
   Select the virtual track for track "3".
4. **Trk4-VTr.....[A, B, C, D, E, F, G, H]**
   Select the virtual track for track "4".

RHYTHM

Here you can make rhythm settings, and specify the tempo and time signature for the currently selected song.

P.1 Rhythm Pattern

1. **Rhythm .....[off, 01...50]**
   This specifies the rhythm pattern. The patterns you can select will depend on the time signature ("Beat") you've chosen. For a list of the available patterns, refer to "Rhythm pattern list."

   note You can switch the rhythm on / off by pressing the [RTM LVL] knob.

P.2 Tempo

1. **Tempo .....[40...240]**
   Specifies the tempo.

P.3 Beat

1. **Beat ..... [1 / 4...8 / 4, 1 / 8...8 / 8]**
   Specifies the time signature.

P.4 RhythmLv: Rhythm volume

1. **RhythmLv.....[0...50]**
   This sets the volume level of the rhythm. You can also set this by turning the [RTM LVL] knob.

LOCATE

Here you can change the format of the counter display, and use the counter to change the current time location.

1. Counter .....

In “LOCATE” mode, turning the [VALUE] dial will change the counter display format. When you press the CURSOR [►] key, the counter display will blink, and you can use the [VALUE] dial to move the time location. Use the CURSOR [◄] / [►] keys to select the units of movement.

00:00.00 (MSM) The current time location is shown as the absolute time from the beginning of the song. From the left, the display units are Minutes:Seconds.Milliseconds (1/1000th of a second).

001.1.00 (MBT) The current time location is shown as the number of measures from the beginning of the song. Use “RHYTHM” mode to specify the time signature and tempo. From the left, the display units are Measure.Beat.Tick (1/96th of a beat).

SONG SEL: Song select

Here you can select any song by name and / or number.

note Another way to select the next-numbered song is to hold down the [STOP] key and press the [FF] key while playback is stopped. Similarly, to select the previous-numbered song, hold down the [STOP] key and press the [REW] key while playback is stopped at the beginning of the song (“00:00.00”). These functions are available regardless of whether you are in “SONG SEL” mode.

P.1 Song Select: select a song

1. SongSelect .....[1...99]

This selects the song. Use the [VALUE] dial to select the desired song. When the display indicates the name and number of the correct song, press the CURSOR [►] key to recall the song.

SONG EDIT

Here you can edit and rename songs.

These editing operations cannot be Undone after execution.

P.1 NameSong: edit the song name

Here you can edit the name of the currently selected song. Refer to “3. Changing the name of a song” in “Step 2. Creating or selecting a song” of the Operation section.

P.2 CopySong: copy a song

This operation copies the selected song to the specified (destination) song number.

1. **DestSong .....[1...99]**
   Select the copy-destination song number. The range is from “1” to “the last existing song number.”
2. **Copy OK?..... [Yes, No]**
   Select “Yes” and press the CURSOR [►] key to execute the operation. If “CopySong” is not a new song number, the songs following that number will be renumbered upward by one.

You can’t Undo this operation.

P.3 DelSong: Delete a song

This operation deletes the selected song.

1. **DestSong .....[1...99]**
   Confirm the number of the song that will be deleted.
2. **Del OK?..... [Yes, No]**
   Select “Yes” and press the CURSOR [►] key to execute the operation. The “DelSong” will be deleted, and the songs following that number will be renumbered downward by one.

You can’t Undo this operation.

NEW SONG: Creating a new song

Here you can create a new song.

P.1 SongGrade: specify the song grade

1. SongGrade .....[Hiq, Std, Eco]
Select the song grade (recording quality) for the song you want to create.
Hiq (High Quality): best audio quality
Std (Standard): standard audio quality
Eco (Economy): longest recording time

CARD

Here you can view information about the card, check the card, format the card, or manage effect user files.

All data on the card will be lost when you format it.

P.1 CardInfo (Infomation): View card information

Here you can view the card type, and the amount of free area.

1. Capacity [16M, 32M, 64M, 128M, 256M, 512M, 1G, 2G]
This displays the type of card that is currently being used. The capacity is shown in Megabytes (M) or Gigabytes (G).

2. Free[%] .....
This indicates the percentage (%) of free space available on the currently-used card (i.e., space that can be written).

P.2 CdFxSave: Saving an effect user file

This operation saves the effect user data to the card.

1. Save Num.....[1, 2]
Select the save destination for the effect data.
1: The data will be saved to Num1 (the data that is loaded at power-on).
2: The data will be saved to Num2.

note The normal effect write operation (→p.39) will always overwrite the data onto Num1.EFF. If you do not want to overwrite, select "2."

P.3 CdFxLoad: Loading an effect user file

This operation loads the effect user data into internal memory.

1. Load Num..... [Int, 1, 2]
Select the effect data load source.
Int: Load the initial settings (preset data).
1: Load from Num1 (the data that is loaded at power-on).
2: Load from Num2.

It is not possible to load a user effect program individually.

P.4 CdRecvey: Recover card data

This operation checks and recovers a card. (→p.55)
Press the CURSOR [►] key to execute the Card Recover operation.

P.5 CdFormat: Format a card

This operation formats (initializes) a card. A card that has been used by another device must be formatted. (→p.55)

All the data on the card will be lost when you execute the Format operation.

1. FmtType? .....
Select the format type.
Std: Standard formatting.
Full: Complete formatting.

note If you're using the card with the D4 for the first time, select "Full" to perform a complete format.

USB

Choose this mode when you want to connect the D4 to your computer. For details, refer to "1. Connecting the D4 to your computer via USB" in "Step 12. Saving data on your computer" of the Operation section.

Effect types

Use the four effect type keys ([GUITAR / MIC], [INSERT / GTR+VO)], [MASTER], and [FINAL]) to select an effect type. (This selection determines the location in the signal path where the effect will be inserted.)
Each effect program is based on one of the eleven different "chains" — ways in which effect modules are connected. Each effect module in a chain can be edited and switched on / off independently. After you've edited an effect program, you can save it as user data.

Effect types and chain structure

The following diagrams show the structure of each chain, and which chains can be used for each effect type.

[GUITAR/MIC] Monaural in - Monaural out

[CHAIN A] This chain is suitable for electric guitar or electric bass.

[CHAIN B] This chain is suitable for electric guitar or electric bass.

[CHAIN C] This chain is suitable for electric guitar or electric bass.

[CHAIN D] This chain allows multiple inputs such as from a mic, electric bass, or synthesizer.

[CHAIN E] This chain is suitable for mic input.

[INSERT/GTR+VO] Stereo in - Stereo out
[MASTER] Stereo in - Stereo out
[FINAL] Stereo in - Stereo out

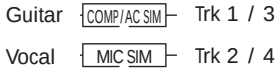
[CHAIN 1] This chain lets you use modulation and delay simultaneously.

[CHAIN 2] This chain is suitable for final adjustment of the level during mixdown.

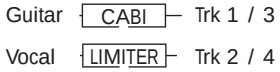
[CHAIN 3] This chain provides completely independent modulation effects for the Left and Right channels.

[CHAIN 4] This chain provides a high-quality reverb.

[CHAIN 5] This chain is suitable for an acoustic instrumentalist / vocalist.



[CHAIN 6] This chain is suitable for an instrumentalist / vocalist.



FX: Effects

note The number of effect pages and their content will depend on the type of effect you select.

note If you've selected an effect page, the [PAN] knobs can be used to edit the effect parameters. The display shows "PARAM#" (where # is 1–5) icons to indicate the knobs used to edit parameters. You can press a [PAN] knob to select an effect to edit. By pressing the same [PAN] knob repeatedly, you can switch that effect on / off.

P.1 FxSelect: select an effect program

To enter this page, select one of the four effect types: [GUITAR / MIC], [INSERT / GTR+VO], [MASTER], or [FINAL].

1. FxSelect [P.00...49*1 / P.50...99*2, U00..99, A...E, 1...6*3]

*1: When effect type = GUITAR / MIC, *2: When effect type = INSERT / GTR+VO, MASTER, or FINAL, *3: Chain type display. A..E=GUITAR / MIC, 1...4: INSERT / GTR+VO, MASTER, or FINAL, 5...6=INSERT / GTR+VO (for instrumentalist / vocalist)

Use this parameter to select the effect program. The available effects will depend on the effect type. Numbers preceded by a "U" (e.g., U00) are user-area memories where you can store the effect programs that you've edited.

P.2 DYNA: dynamics

Press the CURSOR [►] key to make "DYNA" blink, or press [PAN] knob 1 to select this module.
***: depends on the effect.

1. EffctSel .....[off, E.01...*]**
Selects the type of limiter or compressor, etc.

1a. (Parameter 1)..... [***]
Use the [PAN 1] knob to edit.

1b. (Parameter 2)..... [***]
Use the [PAN 2] knob to edit.

1c. (Parameter 3) ..... [***]
Use the [PAN 3] knob to edit.

1d. (Parameter 4)..... [***]
Use the [PAN 4] knob to edit.

1e. (Parameter 5)..... [***]
Use the [RTM LVL] knob to edit.

P.3 AMP: amplifier

Press the CURSOR [►] key to make "AMP" blink, or press [PAN] knob 2 to select this module.

1. EffctSel .....[off, E.01...*]**
Selects the type of amp simulator.

1a. GAIN.....[1...10]
Use the [PAN 1] knob to edit.

1b. TREBLE.....[1...10]
Use the [PAN 2] knob to edit.

1c. MIDDLE .....[1...10]
Use the [PAN 3] knob to edit.

1d. BASS .....[1...10]
Use the [PAN 4] knob to edit.

1e. LEVEL.....[0...10]
Use the [RTM LVL] knob to edit.

P.4 CABI/EQ: cabinet/equalizer

Press the CURSOR [►] key to make "CABI/EQ" blink, or press [PAN] knob 3 to select this module.

1. Cabinet/Equalizer..... [***]
Select the type of cabinet or equalizer.

P.5 MOD: modulation

Press the CURSOR [►] key to make "MOD" blink, or press [PAN] knob 4 to select this module.

1. Modulation..... [***]
Select the type of modulation.

P.6 AMB: ambience

Press the CURSOR [►] key to make "AMB" blink, or press the [RTM LVL] knob to select this module.

1. Ambience ..... [***]
Select the type of ambience.

P.7 NR/GATE: noise reduction/gate

Press the CURSOR [►] key to select this module.

1. NR/Gate .....[0...100]
Use the dial or the [PAN] knob to edit.

P.8 ProgMVol: program master volume

Press the CURSOR [►] key to select this parameter.
Use the dial to edit.

P.9 FxRetLv: effect return level setting

Press the CURSOR [►] key to select this parameter.

1. FxRetLvl.....[0...100]
If you've selected MASTER as the effect type, this parameter adjusts the return level from the effect to the master output bus. Increasing the return level will increase the amount of effect. You can also use the [RTM LVL] knob to adjust this.

note This page won't appear if you've selected an effect type other than "MASTER."

P.10 FxRetBal: effect return balance setting

Press the CURSOR [►] key to select this parameter.

1. **FxRetBal ..... [L30...cnt...R30]**
   If you've selected MASTER as the effect type, this parameter adjusts the stereo balance of the return from the effect to the master bus.

   note This page won't appear if you've selected an effect type other than "MASTER."

P.11 Rename: edit the name of the effect

Press the CURSOR [►] key to select this parameter.

RenameFx .....
Use the CURSOR [◄]/[►] keys to select the character you want to edit, and use the [VALUE] dial to change that character. When you save the effect, it will be saved with this name.

note To save the effect, press the FX WRITE [PROG] key.

FX WRITE/PROG: save an effect

1. **WriteNum.....[U00...99]**
   Here you can select the save-destination user program number. This is the user program number into which the effect program you edit will be written and stored.
   For details, refer to "3. Saving an effect program" in "Step 7. Using effects" of the Operation section.

FX WRITE/KNOB: register an effect to the Favorites knob

1. **KnobPosi .....[01...11]**
   Select the knob position that you want to use to register a favorite effect. The currently selected effect program will be registered to the knob position you specify here.
   For details, refer to "4. Using the Favorites knob" in "Step 7. Using effects" of the Operation section.

PAN: pan

You can use the D4's knobs to adjust the pan and sends, edit the effects, and adjust amp settings as easily as when using an analog mixer or effect processor. The function of the knobs is switched automatically according to the mode you select. Then you can press the [SEL] key and use the knobs for other functions.

When a master type effect is selected

The [SEL] key switches the [PAN] knobs' function between AMP/FX, PAN, and SEND.

When an effect other than a master type effect is selected

The [SEL] key switches the [PAN] knobs' function between AMP/FX and PAN.

note If you're not using the master effect (i.e., when the [MASTER] key is unlit), you can't select SEND.

note When you select a mode, the function of the [PAN] knobs will automatically switch to the following functions.
1. Effect mode AMP/FX EDIT
2. PAN

PAN: adjust the pan (stereo position)

This lets you adjust the pan (stereo position) of each track. If you turn a knob while the counter is shown in the display, the parameter and its value will be shown for a certain length of time.

1. Pan .....

1a. Pan 1 ..... [L30...cnt...R30]

1b. Pan 2 ..... [L30...cnt...R30]

1c. Pan 3 ..... [L30...cnt...R30]

1d. Pan 4 ..... [L30...cnt...R30]

RTM LVL: adjust the rhythm level

When the PAN function is selected, the knob located above the master fader will adjust the rhythm level. This is the same setting as the "RhythmLv" parameter of "RHYTHM" mode.

1e. RhythmLv .....[0...50]

SEND: adjust the send level

Here you can adjust the send level from each track to the master effect. If you turn a knob while the counter is shown in the display, the parameter and its value will be shown for a certain length of time.

note This SEND function is only available when a Master type effect is selected.

1. Send.....

1a. Send 1.....[0...100]

1b. Send 2.....[0...100]

1c. Send 3 .....[0...100]

1d. Send 4.....[0...100]

RETURN: adjust the return level

If you've selected the SEND function, the knob located above the master fader will adjust the return level from the master effect. This is the same setting as the "FxRetLv" parameter of the master effect.

1e. FxRetLv .....[0...100]

Effect modules

This section defines the effect parameters available for each effect module. The effect modules that can be selected will depend on the chain. (→p.82)

DYNA

1. LIMITER

LIMITER

This limits the peaks of the input signal to the specified level.

1. THRESHOLD .[–40...0]: Adjusts the level at which compression will apply.
2. RATIO.....[0...10]: Adjusts the ratio at which the signal will be compressed.
3. ATTACK.....[1...10]: Adjusts the attack time.
4. RELEASE.....[1...10]: Adjusts the release time.
5. LEVEL.....[0...10]: Adjusts the overall level.

2. WAH

WAH UP

This is a band-pass filter type auto wah, similar to a pedal wah.

It is placed before the drive block.

1. ATTACK.....[1...10]: Adjusts the attack speed of the wah in response to your picking.
2. SENS .....[0...10]: Adjusts the sensitivity of the wah.
3. -----(BLANK).....
4. -----(BLANK).....
5. -----(BLANK).....

WAH DWN

This is a wah in which the filter operates in the opposite direction from WAH UP.

* The parameters are the same as “WAH UP.”

B WAH UP (BASS WAH UP)

This is a low-pass filter type auto wah. It is suitable for instruments such as electric bass.

1. ATTACK..... [1...10]: Adjusts the attack speed of the wah in response to your picking.
2. PEAK ..... [0...10]: Adjusts the sensitivity of the wah.
3. -----(BLANK) .....
4. -----(BLANK) .....
5. -----(BLANK) .....

B WAH DWN (BASS WAH DOWN)

This is a wah in which the filter operates in the opposite direction from BASS WAH UP.

* The parameters are the same as “BASS WAH UP.”

3. COMP

CL COMP (CLASSIC COMP)

This is a compressor that makes your picking more consistent and produces a smooth sustain.

1. SENS..... [1...10]: Adjusts the sensitivity of the compressor.
2. -----(BLANK) .....
3. -----(BLANK) .....
4. -----(BLANK) .....
5. -----(BLANK) .....

AMP

1. AMP SIMULATOR / DRIVE

BTQ CL (BOUTIQUE CL)

The clean channel of a 100W high-quality hand-made amp. (Recommended CAB: UK H30)

1. GAIN ..... [1...10]: Adjusts the amount of distortion.
2. TREBLE ..... [1...10]: Adjusts the high-range level.
3. MIDDLE ..... [1...10]: Adjusts the mid-range level.
4. BASS..... [1...10]: Adjusts the low-range level.
5. LEVEL..... [0...10]: Adjusts the overall level.

BLK 2X12 (BLACK 2x12)

A 2x12 combo amp loved by country and blues players. (Recommended CAB: BLK 2x12)

TWD 1X12 (TWEED 1x12)

This models a combo amp covered in tweed. (Recommended CAB: TWD 1x12)

TWD 4X10 (TWEED 4x10)

A 4x10 combo amp designed for bass guitar. (Recommended CAB: TWD 4x10)

AC15

VOX AC15 manufactured in 1962. (Recommended CAB: VOX AC15)

AC30

This models a VOX AC30. (Recommended CAB: VOX AC30)

AC30TB

The brilliant channel of a VOX AC30TB. (Recommended CAB: VOX AC30)

UK BLUES

Vintage stack amp head made in the UK. (Recommended CAB: UK H30)

UK '70S

The high treble channel of a UK-manufactured 100W amp head from 1969. (Recommended CAB: UK H30)

UK '80S

A UK-manufactured amp head with master volume from 1983. (Recommended CAB: UK T75)

UK MDN (UK MODERN)

A 100W modern amp made in the UK. (Recommended CAB: UK T75, US V30)

US MDN (US MODERN)

A high-gain amp with eye-catching metal plate. (Recommended CAB: US V30)

US HI-G (US HIGH GAIN)

A snakeskin-covered 100W amp head from 1991. (Recommended CAB: UK T75, US V30)

BTQ OD (BOUTIQUE OD)

The overdrive channel of a 100W high-quality hand-made amp. (Recommended CAB: UK H30)

FUZZ

Vintage fuzz.

2. BASS AMP SIMULATOR

B VALVE

A vacuum tube amp with the ULTRA LO switch turned on. (Recommended CAB: CLS8X10)

1. MID FC ..... [1...5]: Adjusts the mid-range frequency.
2. TREBLE ..... [1...10]: Adjusts the high-range level.
3. MIDDLE ..... [1...10]: Adjusts the mid-range level.
4. BASS..... [1...10]: Adjusts the low-range level.
5. LEVEL..... [0...10]: Adjusts the overall level.

B VALVE2

A vacuum tube amp ideal for rock. (Recommended CAB: B CL8x10)

B CLASSIC

A vacuum tube amp whose basic character can be varied by the value dial. (Recommended CAB: B COMBI)

B SCOOPD (Scooped)

A typical amp for the sound of the 80's. (Recommended CAB: MT4x10)

B LA STUD

A typical amp for the LA sound. (Recommended CAB: B LA4x10)

B GOLDPN (Gold panel)

A modern amp noted for its clean sound and eye-catching gold panel. (Recommended CAB: B MD4x10)

B JAZZ

A combo amp loved by jazz bassists. (Recommended CAB: B JZ1x15)

B STUDIO

A vacuum tube combo amp ideal for the Motown sound. (Recommended CAB: B ST1X15)

B AC100

A 100W vacuum tube amp made by Vox. (Recommended CAB: B AC 2X15)

B UK MAJ

A 200W vacuum tube amp made in the UK. (Recommended CAB: B UK 4X15)

3. COMP, ACO

CL COMP (Classic Comp)

This is a compressor that makes your picking more consistent and produces a smooth sustain.
If the sound is distorted, lower the LEVEL, TREBLE, MIDDLE, and BASS slightly.

1. SENS ..... [1...10]: Adjusts the sensitivity of the compressor.
2. TREBLE ..... [1...10]: Adjusts the treble (high-range) tone.
3. MIDDLE..... [1...10]: Adjusts the middle (mid-range) tone.
4. BASS ..... [1...10]: Adjusts the bass (low-range) tone.
5. LEVEL ..... [0...10]: Adjusts the output level.

ACOUSTIC

Using the neck pickup of your guitar will produce a more realistic simulation of an acoustic guitar.
This contains a compressor with adjustable sensitivity.
If the sound is distorted, lower the LEVEL, TREBLE, MIDDLE, and BASS slightly.
* The parameters are the same as for "CL COMP."

4. SYNTH

SYNTH

This models a chromatic guitar synth.

1. OSC TYPE ..... [1...16]: Selects the oscillator type.
   - 1: Sawtooth wave 2 octaves down
   - 2: Sawtooth wave 1 octave down
   - 3: Sine wave 1 octave down
   - 4: Sawtooth wave
   - 5: Sine wave
   - 6: Sawtooth wave 1 octave up
   - 7: Sine wave 1 octave up
   - 8: Sine wave 2 octaves up

   Oscillators 9–16 are the same as 0–7 but with portamento applied.
2. VCF .....[0...10.0]: Sensitivity of the Voltage Controlled Filter.
   0...4.7: Sensitivity in the positive (+) direction.
   5.0...10.0: Sensitivity in the negative (-) direction.
   Set this to 5.0 if you're using a sine wave oscillator.
3. DIRECT LEVEL0...10.0: Adjusts the volume of the guitar.
4. SYNTH LEVEL... 0...10.0: Adjusts the volume of the synth.
5. THRESHOLD .....[1...10]: Adjusts the sensitivity at which the synth will play relative to the volume of the guitar.

You'll need to adjust these settings appropriately for your guitar and pickup. A guitar synth works correctly when you play single notes on your guitar. You won't get the correct effect if you play chords. Unexpected results may occur if your instrument is not tuned correctly. If this occurs, please tune your instrument.

CABI/EQ

1. CABINET

BLK 2X10 (BLACK2x10)

Although we did not model the amp that goes exactly with this cabinet, we loved the tone of this mid-60s Fullerton, California made open backed 2x10" ceramic magnet (of US origin) 35 Watt combo. So here it is. Great for blues, jazz and country. As with all cabinet models it can be mixed and matched with any amp model to produce some interesting tonal combinations. But for some recommended uses, please see the following charts.

BLK 2X12 (BLACK2x12)

As you've probably guessed by now, this speaker system accompanied the amp that was modelled for the BLACK 2x12 amp. Featuring two 12" Ceramic magnet speakers, again made in USA in the mid '60s. They are 8 Ohm units wired in parallel for a 4 Ohm total load. These speakers have been featured on countless recordings of many styles of music, but very predominantly Country and Blues based Rock.

TWD 1X12 (TWEED1x12)

This speaker is the other half of our Tweed 1x12 Amp model. As the name suggests it is a single 12" speaker, uses an Alnico magnet and made in the USA by one of the US's revered names in vintage loudspeakers.

TWD 4X10 (TWEED4x10)

Keeping with the US made Alnico magnet speakers, this cabinet partnered our TWEED 4x10 modelled amp. It is an

open backed cab using four 10" 8 Ohm speakers, wired in parallel for a total of 2 Ohms impedance. Although originally intended for bass guitar, this speaker rocks for many different styles.

VOX AC15

This is a 1x12" open backed combo using the famed VOX Blue Alnico speaker, manufactured by Celestion in Ipswich, England. The one we used was a modern re-issue that was housed in the VOX AC15TB combo. This speaker, which is 8 Ohms impedance, 15 Watts power handling, is amazingly full-bodied for a 1x12 open back cab, and, of course, helps bring the famous VOX chime to the forefront.

VOX AC30

Obviously, double the power – double the speakers. 2x12" VOX Blue Alnicos, wired in series for 16 Ohms, adds even more of that great VOX tone. This time we modelled some great sounding originals from way back in the '60s. As speakers get old their tone changes, so this configuration adds a different slant on how these speakers sound.

AD412

This cabinet is one of VOX's latest products, and due to the fact we are extremely proud of it, and that it is without a doubt an exceedingly great sounding cabinet, we just had to include it with our cabinet models. The cabinet itself features custom designed Celestion speakers using Neodymium magnets, one of the first, if not the first, cabinet to use this technology. It also uses some special cabinet acoustic design technology that is also a first for VOX and 4x12s in general. Use it as a valid tonal option with any model, but especially the amp head models. We think you will like it!

UK H30

This is an older, heavy-duty cabinet (with 30 Watt speakers, from the late '60s) made by the same famous UK amp company as the UK T75 4x12. Many of these cabinets have been used on countless classic rock recordings throughout the past. Now you can get that great tone direct to tape.

UK T75

This 4x12" model is of a famous, UK built, black box loaded with modern, 75 Watt British speakers. Normally seen stacked, this is probably the biggest selling guitar cabinet ever and is eminently suitable for most rock styles. How could we not model it?!

US V30

This black beast of a cabinet hails from the same home in California as our US Modern amp. It uses four UK made "Vintage" named speakers.
It is renowned for its deep bass and high-end detail and is extremely popular amongst today's "nu-metal" exponents. We think you know what we mean!

2. BASS CABINET

B LA4X10

This models an LA sound cabinet containing four 10 inch speakers.

1. PRESENCE ..... [0...10]
2. ---- (BLANK)
3. ---- (BLANK)
4. ---- (BLANK)
5. ---- (BLANK)

B MD4X10 (Modern 4X10)

This models a modern cabinet containing four 10 inch speakers.

B MT4X10 (Metal 4X10)

This models a cabinet containing four 10 inch aluminum-coned speakers.

B CL8X10 (Classic 8X10)

This models a classic cabinet containing eight 10 inch speakers.

B UK4X12

This models a UK-manufactured cabinet containing four 12 inch speakers.

B ST1X15 (Studio 1X15)

This models a studio combo cabinet containing one 15 inch speaker.

B JZ1X15 (Jazz 1X15)

This models a jazz combo cabinet containing one 15 inch speaker.

B AC2X15

This models an AC100 cabinet containing two 15 inch speakers.

B US2X15

This models a US-manufactured cabinet containing two 15 inch speakers.

B UK4X15

This models a UK-manufactured cabinet containing four 15 inch speakers.

B LA1X18

This models an “LA sound” cabinet containing one 18 inch speaker.

B COMBI

This models a combination cabinet containing one 12 inch and one 18 inch speaker.

3. EQ

Six types of 4-band graphic equalizer are provided, each with different center frequency settings for the various bands.

LOW EQ

Bands 1–4 correspond to 80 Hz, 120 Hz, 250 Hz, and 550 Hz.

1. 80Hz.....[–10...+10]: Band 1 level
2. 120Hz.....[–10...+10]: Band 2 level
3. 250Hz.....[–10...+10]: Band 3 level
4. 550Hz.....[–10...+10]: Band 4 level
5. LEVEL ..... [0...10]: Adjusts the overall level.

MID EQ

Bands 1–4 correspond to 250 Hz, 550 Hz, 1 kHz, and 4 kHz.

* The parameters are the same as “LOW EQ.”

HIGH EQ

Bands 1–4 corresponds to 640 kHz, 2 kHz, 6.4 kHz, and 12 kHz.

* The parameters are the same as “LOW EQ.”

WIDE EQ1

Bands 1–4 correspond to 120 Hz, 250 Hz, 2 kHz, and 10 kHz.

* The parameters are the same as “LOW EQ.”

WIDE EQ2

Bands 1–4 correspond to 100 Hz, 550 Hz, 1.2 kHz, and 4 kHz.

* The parameters are the same as “LOW EQ.”

WIDE EQ3

Bands 1–4 correspond to 80 Hz, 125 Hz, 640 Hz, and 1.5 kHz.

* The parameters are the same as “LOW EQ.”

4. MIC SIMULATOR

When recording sound that is output from an acoustic instrument or a speaker, it is best to use a mic that takes advantage of the characteristics of the source.
When using the built-in condenser mic of the D4, you can simulate the mic that is most appropriate for the source being recorded.

VNTG.DY (VINTAGE DYNAMIC)

This simulates the warm and rich sound of a vintage dynamic mic, and is ideal for vocals.

1. SETTING .....[1...4]: Switches the location of the mic. (1: Close, 2: On, 3: Off, 4: Far)
2. TRIM .....[0...10]: Adjusts the input level.
3. -----(BLANK).....
4. -----(BLANK).....
5. -----(BLANK).....

When you select the “Close” or “On” setting, the proximity effect will produce a boosted low range, so you will need to use “TRIM” to adjust the overall level.

MULTI.CN (MULTI CONDENSER)

This simulates a general-purpose studio condenser mic, and has a broad range from low to high frequencies that suits most instruments.

* The parameters are the same as “VNTG.DY.”

PERC.CN (PERCUSSION CONDENSER)

This simulates a small condenser mic designed for instruments, which has a distinctive high range and is ideal as an overhead mic for drums or for use with acoustic guitar.

* The parameters are the same as “VNTG.DY.”

WHALE.DY (WHALE DYNAMIC)

This simulates a mic characterized by clarity and a sense of volume, and is ideal for drum sounds.

* The parameters are the same as “VNTG.DY.”

VOCAL.CN (VOCAL CONDENSER)

This simulates a widely-used studio condenser mic, and is ideal for vocals, acoustic instruments, and narrations.

* The parameters are the same as “VNTG.DY.”

VOCAL.TB (VOCAL TUBE)

This simulates a vintage tube mic, and is ideal for vocals.

* The parameters are the same as “VNTG.DY.”

B DRM.DY (BASS DRUM DYNAMIC)

This simulates a fairly large dynamic mic, and is suitable when you want to capture the sense of air movement felt with a close-miked bass drum.

* The parameters are the same as “VNTG.DY.”

MODULATION

1. MODULATION

CHORUS

ST CHRUS (STEREO CHORUS)

These effects give the sound depth and warmth by modulating the delay time.

1. TIME .....[1...10]: Adjusts the delay time, controlling the frequency range at which the effect will apply. Adjusting this toward 0 will cause the modulation to occur at a higher pitch.
2. -----(BLANK) .....
3. SPEED .....[0.1...10Hz]: Adjusts the speed at which the pitch is modulated.
4. DEPTH ..... [0...10]: Adjusts the depth at which the pitch is modulated.
5. MIX ..... [0...10]: Adjusts the amount of effect mixed into the sound.

FLANGER

ST FLNGE (STEREO FLANGER)

These effects give the sound modulation and a sense of pitch movement.

1. TIME.....[1...10]: Adjusts the delay time, controlling the frequency range at which the effect will apply. Adjusting this toward 0 will cause the modulation to occur at a higher pitch.
2. FEEDBACK..[–10...+10]: Adjusts the unique character of sound. Raising this setting appropriately will produce a "jet" effect.
3. SPEED.....[0.1...10Hz]: Adjusts the speed at which the pitch is modulated.
4. DEPTH.....[0...10]: Adjusts the depth at which the pitch is modulated. When set to 10, the TIME parameter has no effect.
5. MIX .....[0...10]: Adjusts the amount of effect mixed into the sound.

MOD DELAY

ST MODDLY (STEREO MOD DELAY)

These effects can also modulate the delay time to produce chorus or flanger-like effects.

1. TIME .....[0...1.75]: Adjusts the delay time.
2. FEEDBACK..... [0...+10]: Adjusts the feedback (repeated "echoes").
3. SPEED.....[0.1...10Hz]: Adjusts the speed at which the pitch is modulated.
4. DEPTH.....[0...10]: Adjusts the depth at which the pitch is modulated.
5. MIX .....[0...10]: Adjusts the amount of effect mixed into the sound.

TREMOLO

TREM / PAN (TREMOLO / PAN)

These effects simulate the tremolo that is built into some guitar amps. TREM / PAN can be selected in CHAIN 1.

1. -----(BLANK).....
2. SPREAD .....[0...10]: Switches between tremolo and pan. *For TREM / PAN
   -----(BLANK) .....: *For TREMOLO
3. SPEED .....[1.0...10Hz]: Adjusts the speed of tremolo.
   .....[0.1...10Hz]: Adjusts the speed of tremolo.
   *For TREM / PAN
4. DEPTH ..... [0...10]: Adjusts the depth of tremolo.
5. -----(BLANK) .....:

PTCH SFT (PITCH SHIFTER)

ST PITCH (STEREO PITCH SHIFTER)

These are pitch shifter effects with a ±2 octave range of adjustment.

1. -----(BLANK) .....
2. -----(BLANK) .....
3. PITCH.....[–24...+24]: Adjusts the pitch change amount.
4. FINE.....[–50...+50]: Fine adjustment of pitch change amount.
5. MIX ..... [0...10]: Adjusts the amount of effect mixed into the sound.

For stereo

1. L PITCH .....[–24...+24]: Adjusts the L ch pitch change amount.
2. L FINE .....[–50...+50]: Fine adjustment of the L ch pitch change amount.
3. R PITCH .....[–24...+24]: Adjusts the R ch pitch change amount.
4. R FINE .....[–50...+50]: Fine adjustment of the R ch pitch change amount.
5. MIX ..... [0...10]: Adjusts the amount of effect mixed into the sound.

PHASER

ST PHSER (STEREO PHASER)

These modulate the phase to give a "swirling" character to the sound.

1. MANUAL ..... [1...10]: Adjusts the frequency at which the effect applies.
2. FEEDBACK ..... [0...10]: Adjusts the distinctive tonal character.
3. SPEED .....[0.1...10Hz]: Adjusts the modulation speed.
4. DEPTH ..... [0...10]: Adjusts the depth of the effect.
5. -----(BLANK) .....

OCTAVE

This effect generates a sound one octave below the input, which can be mixed into the original sound to give it more "bottom end."

This may not operate correctly if you play multiple strings simultaneously, or if you play low notes.

1. -----(BLANK).....
2. -----(BLANK).....
3. -----(BLANK).....
4. OCTAVE .....[0...10]: Adjusts the amount of one-octave lower sound.
5. DIRECT .....[0...10]: Adjusts the amount of original sound.

SLOW ATK (SLOW ATTACK)

This slows the attack of each picked note, producing a violin-like effect.

1. ATTACK.....[1...10]: Adjusts the time over which the volume rises.
2. THRESHOLD ...[1...10]: Adjusts the level at which the effect applies.
3. -----(BLANK).....
4. -----(BLANK).....
5. -----(BLANK).....

AMBIENCE

1. DELAY

DELAY (MONO DELAY)

This is a mono delay with a maximum delay time of 2.0 seconds.

1. TIME..... [0...2s]: Adjusts the delay time.
2. FEEDBACK ..... [0...10]: Adjusts the feedback (delay repeats).
3. TONE..... [0...10]: Adjusts the tone of the delayed sound.
4. -----(BLANK) .....
5. MIX ..... [0...10]: Adjusts the mix amount of the delayed sound.

2. AMBIENCE

ECHO

This effect simulates a tape echo unit.

1. TIME..... [1...10]: Adjusts the delay time.
2. FEEDBACK ..... [0...10]: Adjusts the feedback (delay repeats).
3. TONE..... [0...10]: Adjusts the tone of the echo.
4. -----(BLANK) .....
5. MIX ..... [0...10]: Adjusts the mix amount of the echo.

ST DELAY (STEREO DELAY)

This is a stereo delay with a maximum delay time of 1.0 second (for CHAIN1) or 1.75 seconds (for CHAIN4).

1. TIME..... [0...1s]: Adjusts the delay time.
   ..... [0...1.75s]: *For CHAIN4
2. FEEDBACK ..... [0...10]: Adjusts the feedback (delay repeats).
3. TONE..... [0...10]: Adjusts the tone of the delayed sound.
4. SPREAD ..... [0...10]: Adjusts the left / right spread of the sound.
5. MIX ..... [0...10]: Adjusts the mix amount of the delayed sound.

PP DELAY (STEREO PING PONG DELAY)

This is a stereo delay in which the sound bounces between left and right.

1. TIME ..... [0...1.75s]: Adjusts the delay time.
2. FEEDBACK..... [0...10]: Adjusts the feedback (delay repeats).
3. TONE..... [0...10]: Adjusts the tone of the delayed sound.
4. MODE..... [1, 2]: Switches the order of output.
   1: Output from L, 2: Output from R
5. MIX ..... [0...10]: Adjusts the mix amount of the delayed sound.

ROOM (ROOM REVERB)

This simulates the acoustics of rooms ranging from a small studio-sized room to mid-sized rooms such as a garage.

1. TIME ..... [1...10]: Adjusts the length of reverberation.
2. -----(BLANK).....
3. TONE..... [1...10]: Adjusts the tone of the reverberation.
4. -----(BLANK).....
5. MIX ..... [0...10]: Adjusts the mix amount of the reverberation.

HALL (HALL REVERB)

This simulates the acoustics ranging from mid-sized to large halls

* The parameters are the same as “ROOM.”

SPRING (SPRING REVERB)

This simulates the spring reverb unit built into some guitar amps.

* The parameters are the same as “ROOM.”

PLATE (PLATE REVERB)

This simulates a plate reverb unit.

* The parameters are the same as “ROOM.”

NR/GATE

note The NR/GATE block is not displayed as an effect module, but can be selected as part of the edit parameters.

1. NR

NR (NOISE REDUCTION)

This effect suppresses noise.

1. NR SEND ..... [0...10]: Adjusts the depth of the effect.
2. -----(BLANK) .....
3. -----(BLANK) .....
4. -----(BLANK) .....
5. -----(BLANK) .....

note It is not possible to turn “NR” off. If you do not want to apply the effect, set “NR SEND” to “0.”

note To edit NR, press the CURSOR [►] key to make the display indicate “NR Send.”

2. GATE

GATE (NOISE GATE)

This effect suppresses noise.

1. GATE THRESHOLD .. [0...10]: Adjusts the level at which compression is applied.
2. GATE ATTACK [1...10]: Adjusts the attack time.
3. GATE RELEASE[1...10]: Adjusts the release time.
4. -----(BLANK) .....
5. -----(BLANK) .....

note It is not possible to turn the “GATE” off. If you do not want to apply the effect, set “GATE THRESHOLD” to “0.”

note To edit GATE, press the CURSOR [►] key to make the display indicate “GATE THRESHOLD.”

Effect Program List

Preset

	Prog name	Chain No.	For		Prog name	Chain No.	For		Prog name	Chain No.	For		Prog name	Chain No.	For
00	BTQ CLN	#A	E.Guitar	25	EC WAH	#C	E.Guitar	50	FINALMIX	#2	Fainal	75	HardComp	#2	Insert
01	BLK2X12	#A	E.Guitar	26	DLY SOLO	#B	E.Guitar	51	POP_MIX	#2	Fainal	76	SoftLimt	#2	Insert
02	TWD4X10	#A	E.Guitar	27	B SLAP	#C	Bass Guitar	52	CLUB_MIX	#2	Fainal	77	HardLimt	#2	Insert
03	AC30TB	#A	E.Guitar	28	B FING	#C	Bass Guitar	53	ROCK_MIX	#2	Fainal	78	UltraLim	#2	Insert
04	UK'80S	#A	E.Guitar	29	B PICKER	#C	Bass Guitar	54	STD_MIX	#2	Fainal	79	LowRngEQ	#2	Insert
05	UK MDN	#A	E.Guitar	30	B VALVE	#C	Bass Guitar	55	LIM-HiEQ	#2	General	80	MidRngEQ	#2	Insert
06	US MDN	#A	E.Guitar	31	B THUMB	#C	Bass Guitar	56	LIM-MidQ	#2	General	81	Hi_RngEQ	#2	Insert
07	VALVE	#C	B.Guitar	32	B CONTRY	#C	Bass Guitar	57	LIM-LowQ	#2	General	82	Max_Bass	#2	General
08	LA STUD	#C	B.Guitar	33	B CHORUS	#A	Bass Guitar	58	TAPE_SIM	#2	General	83	Cl_Sound	#2	General
09	JAZZ	#C	B.Guitar	34	B PHASER	#A	Bass Guitar	59	DIGI_SIM	#2	General	84	NaturlEQ	#2	Insert
10	ACOUS	#A	E.Guitar	35	B SLWATK	#A	Bass Guitar	60	BrightHL	#4	Master	85	LowCutEQ	#2	Insert
11	IRONMAN	#A	E.Guitar	36	B DELAY	#B	Bass Guitar	61	MiniHall	#4	Master	86	LowBstEQ	#2	Insert
12	ALICE	#A	E.Guitar	37	MIC ACOU	#E	Ac.Guitar*	62	BrightPL	#4	Master	87	Hi_BstEQ	#2	Insert
13	MAHAVISU	#A	E.Guitar	38	MicAcou2	#E	Ac.Guitar*	63	Room_RV	#4	Master	88	Hi_CutEQ	#2	Insert
14	GOVTMULE	#A	E.Guitar	39	ACOUS DI	#E	Ac. Guitar	64	SpringRV	#4	Master	89	DigiGate	#2	Insert
15	UNCHAIN	#A	E.Guitar	40	AcousDi2	#E	Ac. Guitar	65	Echo	#4	Master	90	GTR_VOX1	#5	Insert
16	PASSION	#A	E.Guitar	41	VOC MIC	#E	Vocals*	66	Voc_Chor	#1	Master	91	GTR_VOX2	#6	Insert
17	5TH B'LO	#A	E.Guitar	42	VOC MIC2	#E	Vocals*	67	VocPhasr	#1	Master	92	Radio_EQ	#2	General
18	SUPEROCT	#A	E.Guitar	43	MIC DI	#E	Vocals	68	PsftEcho	#1	Master	93	DriveLim	#2	General
19	MAYDELAY	#A	E.Guitar	44	MIC DI2	#E	Vocals	69	St_Flang	#3	Master	94	Max_Lim	#2	General
20	JIMIHAZE	#A	E.Guitar	45	DRUM MIC	#E	Drums*	70	St_Pitch	#3	Master	95	PP_Delay	#4	Master
21	POLICE	#A	E.Guitar	46	DrumMic2	#E	Drums*	71	St_Phase	#3	Master	96	SweepFlg	#1	Master
22	WES	#A	E.Guitar	47	KB LO EQ	#D	Key board	72	St_Chors	#3	Master	97	Oct-Dely	#1	Master
23	MEGADAVE	#B	E.Guitar	48	KB MIDEQ	#D	Key board	73	St_MdDly	#3	Master	98	PDlyEcho	#1	Master
24	DOOKIE	#A	E.Guitar	49	KB HI EQ	#D	Key board	74	SoftComp	#2	Insert	99	Pan-Echo	#1	Master

* (Internal MIC)

User

	Prog name	Chain No.	For
0	TEXFLOOD	#A	E.Guitar
1	X-SOLO	#A	E.Guitar
2	TEXSTREM	#A	E.Guitar
3	TWEEDMAN	#B	E.Guitar
4	HARDDAYS	#A	E.Guitar
5	SOMETHING	#B	E.Guitar
6	PAPAERBAK	#A	E.Guitar
7	MR'ANGUS	#A	E.Guitar
8	BLIZZARD	#A	E.Guitar
9	MR'335	#A	E.Guitar
10	JAKESOLO	#A	E.Guitar

note U11–U99 contain the same data as the presets.

Effect Chain List

note Effects marked by an asterisk* generate the effect sound from the L channel of the input, and produce a stereo effect from L/R. When using these effects, be sure to input the signal to the L channel.

For each chain, the following effects can be selected.

CHAIN A AMP - CABI - NR - MOD

	[AMP]	[CABI/EQ]		[MOD]
	AMP	**CABINET**	**NR**	**MOD**
	OFF	OFF	NR	OFF
E.01	BTQ CL	BLK 2X10		CHORUS
E.02	BLK 2X12	BLK 2X12		FLANGER
E.03	TWD 1X12	TWD 1X12		MODDELAY
E.04	TWD 4X10	TWD 4X10		TREMOLO
E.05	AC 15	VOX AC15		PTCH SFT
E.06	AC 30	VOX AC30		PHASER
E.07	AC 30TB	AD 412		OCTAVE
E.08	UK BLUES	UK H30		SLOW ATK
E.09	UK '70S	UK T75		
E.10	UK '80S	US V30		
E.11	UK MDN	B LA4x10		
E.12	US MDN	B MD4X10		
E.13	US HI-G	B MT4X10		
E.14	BTQ OD	B CL8X10		
E.15	FUZZ	B UK4X12		
E.16	B VALVE	B ST1X15		
E.17	B VALVE2	B JZ1X15		
E.18	B CLASIC	B AC2X15		
E.19	B SCOOPD	B US2X15		
E.20	B LA STU	B UK4X15		
E.21	B GOLDPN	B LA1X18		
E.22	B JAZZ	B COMBI		
E.23	B STUDIO			
E.24	B AC 100			
E.25	B UK MAJ			
E.26	CL COMP			
E.27	ACOUSTIC			
E.28	SYNTH			

CHAIN B AMP - CABI - NR - DELAY

	[AMP]	[CABI/EQ]		[AMB]
	AMP	**CABINET**	**NR**	**DELAY**
	OFF	OFF	NR	OFF
E.01	BTQ CL	BLK 2X10		DELAY
E.02	BLK 2X12	BLK 2X12		
E.03	TWD 1X12	TWD 1X12		
E.04	TWD 4X10	TWD 4X10		
E.05	AC 15	VOX AC15		
E.06	AC 30	VOX AC30		
E.07	AC 30TB	AD 412		
E.08	UK BLUES	UK H30		
E.09	UK '70S	UK T75		
E.10	UK '80S	US V30		
E.11	UK MDN	B LA4x10		
E.12	US MDN	B MD4X10		
E.13	US HI-G	B MT4X10		
E.14	BTQ OD	B CL8X10		
E.15	FUZZ	B UK4X12		
E.16	B VALVE	B ST1X15		
E.17	B VALVE2	B JZ1X15		
E.18	B CLASIC	B AC2X15		
E.19	B SCOOPD	B US2X15		
E.20	B LA STU	B UK4X15		
E.21	B GOLDPN	B LA1X18		
E.22	B JAZZ	B COMBI		
E.23	B STUDIO			
E.24	B AC 100			
E.25	B UK MAJ			
E.26	CL COMP			
E.27	ACOUSTIC			
E.28	SYNTH			

CHAIN C DYNA - AMP - CABI - NR

	[DYNA]	[AMP]	[CABI/EQ]	
	DYNA	**AMP**	**CABINET**	**NR**
	OFF	OFF	OFF	NR
E.01	LIMITER	BTQ CL	BLK 2X10	
E.02	WAH UP	BLK 2X12	BLK 2X12	
E.03	WAH DWN	TWD 1X12	TWD 1X12	
E.04	B WAH UP	TWD 4X10	TWD 4X10	
E.05	B WAHDWN	AC 15	VOX AC15	
E.06	CL COMP	AC 30	VOX AC30	
E.07		AC 30TB	AD 412	
E.08		UK BLUES	UK H30	
E.09		UK '70S	UK T75	
E.10		UK '80S	US V30	
E.11		UK MDN	B LA4x10	
E.12		US MDN	B MD4X10	
E.13		US HI-G	B MT4X10	
E.14		BTQ OD	B CL8X10	
E.15		FUZZ	B UK4X12	
E.16		B VALVE	B ST1X15	
E.17		B VALVE2	B JZ1X15	
E.18		B CLASIC	B AC2X15	
E.19		B SCOOPD	B US2X15	
E.20		B LA STU	B UK4X15	
E.21		B GOLDPN	B LA1X18	
E.22		B JAZZ	B COMBI	
E.23		B STUDIO		
E.24		B AC 100		
E.25		B UK MAJ		
E.26		CL COMP		
E.27		ACOUSTIC		
E.28		SYNTH		

CHAIN D LIMIT - EQ - GATE - MOD - DELAY

	[DYNA]	[CABI/EQ]		[MOD]	[AMB]
	LIMIT	**4BAND EQ**	**GATE**	**MOD**	**DELAY**
	OFF	OFF	GATE	OFF	OFF
E.01	LIMITER	LOW EQ		CHORUS	DELAY
E.02		MID EQ		FLANGER	
E.03		HIGH EQ		MODDELAY	
E.04		WIDE EQ1		TREMOLO	
E.05		WIDE EQ2		PTCH SFT	
E.06		WIDE EQ3		PHASER	
E.07				OCTAVE	
E.08				SLOW ATK	

CHAIN E MIC - LIMIT - GATE - MOD - DELAY

	[CABI/EQ]	[DYNA]		[MOD]	[AMB]
	MIC	**LIMIT**	**GATE**	**MOD**	**DELAY**
	OFF	OFF	GATE	OFF	OFF
E.01	VNTG.DY	LIMITER		CHORUS	DELAY
E.02	MULTI.CN			FLANGER	
E.03	PERC.CN			MODDELAY	
E.04	WHALE.DY			TREMOLO	
E.05	VOCAL.CN			PTCH SFT	
E.06	VOCAL.TB			PHASER	
E.07	B DRM.DY			OCTAVE	
E.08				SLOW ATK	

CHAIN 1 MOD = AMB

	[MOD]	[AMB]
	MOD	**AMB**
	OFF	OFF
E.01	CHORUS*	ECHO
E.02	FLANGER*	ST DELAY
E.03	MOD DELAY*	
E.04	TREM / PAN	
E.05	PTCH SFT*	
E.06	PHASER*	
E.07	OCTAVE*	

CHAIN 2 LIMIT = EQ = GATE

	[DYNA]	[CABI/EQ]	
	LIMIT	**4BAND EQ**	**GATE**
	OFF	OFF	GATE
E.01	LIMITER	LOW EQ	
E.02		MID EQ	
E.03		HIGH EQ	
E.04		WIDE EQ1	
E.05		WIDE EQ2	
E.06		WIDE EQ3	

CHAIN 3 MOD

	[MOD]
	MOD
	OFF
E.01	ST CHRUS
E.02	ST FLNGE
E.03	STMODDLY
E.04	ST PITCH
E.05	ST PHSER

CHAIN 4 AMB

	[AMB]
	AMB
	OFF
E.01	ROOM*
E.02	HALL*
E.03	SPRING*
E.04	PLATE*
E.05	ECHO
E.06	ST DELAY
E.07	PP DELAY

CHAIN 5 COMP, ACO + MIC

	[AMP]	[CABI/EQ]
	COMP, ACO	**MIC**
	OFF	OFF
E.01	CL COMP	VNTG.DY
E.02	ACOUSTIC	MULTI.CN
E.03		PERC.CN
E.04		WHALE.DY
E.05		VOCAL.CN
E.06		VOCAL.TB
E.07		B DRM.DY

CHAIN 6 CABI + LIMIT

	[CABI/EQ]	[DYNA]
	CABINET	**LIMIT**
	OFF	LIMITER
E.01	BLK 2X10	
E.02	BLK 2X12	
E.03	TWD 1X12	
E.04	TWD 4X10	
E.05	VOX AC 15	
E.06	VOX AC 30	
E.07	AD 412	
E.08	UK H30	
E.09	UK T75	
E.10	US V30	

Troubleshooting

No sound

- ☐ Is the power of the D4 and / or connected devices turned on? (→p.17)
- ☐ Is the amp or headphone connection correct?

Can't hear the playback

- ☐ The [MASTER] fader or [PHONE LEVEL] knob may have been set to "0."
- ☐ The track volume level may have been lowered.
- ☐ If when using punch-in / out you cannot hear the playback for other than the specified recording range of the recording track, you may have turned the "AutoIn" function "On." (→p.31, 57)

Can't hear the input sound

- ☐ Is the [INPUT SELECT] switch set correctly?
- ☐ Have you pressed a [REC SELECT] switch to set the desired input track as the recording track?
- ☐ Is the [INPUT LEVEL] knob raised to an appropriate level?
- ☐ Make sure that sound is being input.
- → Turn the INPUT LEVEL knob and check whether sound is being input. Raise the [TRACK] fader of the track that's selected for recording (by its [REC SEL] key), and also raise the [MASTER] fader to an appropriate position. If the level meter is not moving, sound is not being input to the track.
- ☐ If you no longer hear the input sound when a recording track is played back, did you set "AutoIn" to "Off"? (→p.31, 57)

[PAN] knobs don't work

- ☐ After you've edited an effect or used the [PAN] knobs to adjust the pan or send, the physical positions of the [PAN] knobs may no longer match the actual panning settings.
- → Press the [EXIT] key to leave the mode you're in, and move the [PAN] knobs to left and right so that the [PAN] knobs will match the actual panning settings.

Can't record

- ☐ Could the [TRACK] faders be lowered? (for conventional recording)
- ☐ Could the [MASTER] fader be lowered? (for bounce recording; i.e., when REC MODE is set to "BOUNCE" etc.)
- ☐ Have you enabled recording (LED lit) on the track(s) you want to record?
- ☐ Could there be insufficient free space on the card?
- ☐ Is the REC MODE appropriate? (→p.56)
- → If the REC MODE is set to "CnvrtMP2," the recorded result will be created as a new song. (→p.52)

Can't record two tracks simultaneously

☐ The "EFFECT ASSIGN" (effect insert location) may have been set to "GUITAR / MIC."
→ If this is set to "GUITAR / MIC," only one track can be recorded simultaneously.

Input sound or recorded sound contains noise or distortion

☐ Is the [INPUT LEVEL] knob raised to an appropriate level?
→ The sound will distort if the [INPUT LEVEL] knob setting is too high, or will be noisy if the setting is too low. (→p.21)
☐ If the input to the effect is distorted, make the following adjustments.
Guitar/insert effect: Use the [INPUT LEVEL] knob etc. to adjust the volume as high as possible without allowing the [INPUT LEVEL] LED to light.
Master effect: Adjust the faders and send level so that "CLIP" for the master L / R track does not light.
Final effect: Adjust the faders so that "CLIP" does not light for the master L / R track.
☐ If the effect output is distorted, make the following adjustments.
Guitar/insert effect: Adjust the effect parameters and [INPUT LEVEL] while listening to the sound.
Master/final effect: Adjust the effect parameters so that "CLIP" for the master L / R track does not light.

Effect does not apply

☐ Tuner mode may have been selected.
→ The effect will be bypassed (off) when the tuner is selected.
☐ Is the master volume of the effect program set to "0" or close to "0"?
→ Press an effect type key (e.g., [GUITAR / MIC]) and then press the CURSOR [►] key several times to make the display read "ProgMVol," and adjust the volume.
☐ Is the [INPUT LEVEL] knob raised to an appropriate level?
→ The effect may not be applied if the [INPUT LEVEL] knob value is too low.

Guitar / insert effect does not apply

☐ Is the effect insert location appropriate?
→ Press the FX [GUITAR / MIC] or [INSERT / GTR+VO] key to choose "GUITAR / MIC" or "INSERT / GTR+VO" as the effect type. (→p.37)
☐ It is not possible to use a guitar / insert effect on a playback track.

Master effect does not apply

☐ Is the effect insert location correct?
→ Press the FX [MASTER] key to choose "MASTER" as the effect type. (→p.38)
☐ Is the send level from each track set to "0"or close to "0"?
→ Press the [SEL] key to select "SEND," and use the [PAN] knobs to adjust the send levels of each track.
☐ Is the return level set to "0" or close to "0"?
→ Press the [SEL] key to select "SEND," and then use the [RETURN] knob to adjust the return level.

Final effect does not apply

☐ Is the effect insert location correct?
→ Press the FX [FINAL] key to choose "FINAL" as the effect type. (→p.38)

Rhythm

Can't hear rhythm sounds

☐ Is rhythm selected?
→ Select [RHYTHM] mode, and press the CURSOR [►] key. In the page that indicates the rhythm name, choose a setting other than "Off" for "Rhythm."
☐ The rhythm volume may have been lowered.
→ Either use the [RHYTHM] knob to adjust the rhythm volume, or select [RHYTHM] mode, press the CURSOR [►] key to make the display indicate "RhythmLv," and adjust the rhythm volume.
☐ The recorder may be stopped.
→ Press the [PLAY] key to play back. The rhythm will sound when the recorder is recording or playing. If you want to hear the rhythm while stopped, select [RHYTHM] mode.

Rhythm sound does not stop (volume is too loud)

☐ Has the rhythm been turned on?
→ Press the [RHYTHM] knob to make the LED go dark.
☐ Is the rhythm volume raised excessively?
→ Either use the [RHYTHM] knob to adjust the rhythm volume, or select [RHYTHM] mode, press the CURSOR [►] key to make the display indicate "RhythmLv," and adjust the rhythm volume.

Nothing happens when you press a key

☐ In some cases, a key may not function while the recorder is playing or recording.
→ Stop the recorder and try the operation once again.
☐ The function of the [PAN] knobs doesn't change when you press the [SEL] key.
→ "AMP/FX" can be selected only in Effect mode, and "SEND" can be selected only when mastering recording.
☐ FX settings can't be edited in Tuner mode.
→ Press the [EXIT] key to exit Tuner mode, and then select the desired setting.

Card

Display indicates "No Card!"

☐ Is the card inserted correctly? (→p.16)
→ Turn off the power, re-insert the card, and then turn the power on once again.

Display indicates "CdFormat"

☐ Was the card formatted (initialized) on the D4? (→p.55)
→ If you are using a card that was initialized on another device such as a computer or digital camera, you will need to initialize the card on the D4.
☐ Is the card inserted correctly? (→p.16)
→ Turn off the power, re-insert the card, and then turn the power on once again.

Display indicates "CdRecvry"

☐ Did you turn off the power of the D4 while the card was being accessed? (→p.55)
→ It is possible that the data in the card has been damaged. Execute the Card Recovery operation to recover the data.

USB

Your computer does not recognize the D4

☐ Is the USB cable connected correctly? (→p.53)
→ Re-connect the cable.
☐ Is the D4 in USB mode? (→p.53)

Depending on the computer hardware you are using, your computer may be unable to recognize the D4 via a USB connection.

Your computer does not release the D4

☐ The procedure will depend on the operating system of your computer. (→p.53)

When you connect the D4, you are requested to install software or a device driver

☐ Does the operating system version of your computer support the D4? (→p.53)

Messages

CardLock

☐ While USB-connected, it is forbidden to remove the card from the D4.
→ Do not disconnect the USB cable when this message is displayed. Doing so may damage the data in the card. Data can be written from the computer to the card inserted in the D4.

CdFormat

(→p.86: Display indicates “CdFormat”)

CdNotRdy

☐ While USB-connected, no card is inserted into the D4, or the card cannot be accessed.
→ Insert a card. If a card is already inserted, turn off the power, re-insert the card, and then turn the power on once again. In this state, it is possible to disconnect the USB connection.

CdRecvry

(→p.86: Display indicates “CdRecvry”)

CrdReady

☐ While USB-connected, the computer is ready to access the card inserted in the D4.
→ Data can be written from the computer to the card inserted in the D4. In this state, it is possible to disconnect the USB connection.

CrdRetry

☐ The card cannot be detected correctly, or is in a state in which access is not possible.

→ Insert a card. If a card is already inserted, turn off the power, re-insert the card, and then turn the power on once again.

Finish!

☐ The operation was completed successfully.

SongFull

☐ You have exceeded the maximum number of songs that can be stored in a card.

→ Delete unwanted songs, or use another card.

Working.

☐ An operation is being performed. Please wait until this message disappears.

Error messages

Card#@@@

☐ The card could not be accessed correctly. (@@@ will indicate a number.)

→ Execute "CdRecvry" (→p.55). If an error message still appears, use "CdFormat" (→p.55) to format the card.

>>Card<<

☐ An editing operation such as "CopyTrk" or "Copy-Song" could not be executed due to insufficient free space on the card.

→ Execute "CdRecvry" (→p.55). If an error message still appears, use "DelV-Trk" (→p.50) to delete unneeded tracks. If it is still not possible to execute the operation, delete unneeded songs.

CardFull

☐ There is not enough space on the card for recording.

→ Execute "CdRecvry" (→p.55). If an error message still appears, and you do not mind being unable to Undo the previous operation for that song, execute "DelUndo" (→p.57) for that song. Alternatively, if you do not mind being able to Undo previous operations for all songs, execute "DelUndo" for "All." If this does not increase the free space sufficiently, use "DelV-Trk" (→p.50) to delete unneeded tracks. If there is still not enough space, delete unneeded songs.

CrdSpeed

☐ This will appear if the card cannot be read or written fast enough during playback or recording.

→ Use the "Full" (complete) setting to format the card before using it.

Done OK?

☐ Undo will not be possible; execute anyway?

→ This will be displayed after a warning of "UndoOver." "Yes" will execute and save to the card, or "No" will cancel execution and will not save to the card.

EtryFull

☐ The song cannot be created or renamed or the effects saved, because no more files can be created on the card.

→ Use Delete Song to delete unneeded songs.

EvntFull

☐ Recording is not possible, since there are not enough free events in the song.

→ To increase the number of free events, use “DelV-Trk” (→p.50) to delete unneeded tracks.

In >Out

☐ When executing a track editing operation such as “CopyTrk,” the InTime is located later than the OutTime.

→ Re-specify the time settings correctly.

No Card!

☐ No card is inserted.

→ Insert a card. If a card is already inserted, turn off the power, re-insert the card, and then turn the power back on.

NoLength

☐ When executing a track editing operation, the InTime and OutTime (or ToTime and EndTime) were set to the same time location.

→ Set each time correctly.

RecSave?

☐ Do you want to save the recording as long as there is space on the card?

→ This will be displayed after the “CardFull” warning is displayed. Select “Yes” to save the recording on the card, or “No” to discard the recording and not save it.

SameVTrk

☐ You are attempting to edit the same virtual track of the same track.

→ Check your track selection.

SongFile

☐ The song data is incorrect or has been damaged.

→ Execute “CdRecvry” (→p.55). If an error message still appears, use “DelSong” (→p.44) to delete that song.

SongFull

☐ The maximum number of songs has been exceeded.

→ Delete unneeded songs.

To >End

☐ When executing “ExpTrack,” the ToTime is set later than the EndTime.

→ Set each time correctly.

To-End.5

☐ When executing “ExpTrack,” the ToTime and EndTime are set (relative to the InTime-OutTime) to settings that cannot be executed (i.e., compression to less than 50%).

→ Re-set the time settings to appropriate values.

To-Endx2

☐ When executing “ExpTrack,” the ToTime and EndTime are set (relative to the InTime-OutTime) to settings that cannot be executed (i.e., expansion to greater than 200%).

→ Re-set the time settings to appropriate values.

UndoOver

☐ The Undo memory area of the D4 is full.

→ Execute “CdRecvry” (→p.55). If an error message still appears, use “DelV-Trk” (→p.50) to delete unneeded tracks. If the message still appears, delete unneeded songs. In this state, Undo will not be available, but track editing can still be performed normally.

→ This will appear after the “CardFull” warning has appeared. If you select “Yes,” you will be unable to Undo, but the recording you just made will be saved. If you select “No,” the recording will be discarded and not saved to the card.

Wr?>STOP

☐ In Effect mode, writing is not possible since the recorder is running.

→ Press the [STOP] key to stop the recorder, and then write the data.

Rhythm pattern list

	1/4	2/4	3/4	4/4	5/4	6/4	7/4	8/4	1/8	2/8	3/8	4/8	5/8	6/8	7/8	8/8
1	Metro01	Metro01	Metro01		Metro01	Metro01	Metro01	Metro01	Metro01	Metro01	Metro01	Metro01	Metro01	Metro01	Metro01	Metro01
2	Metro02	Metro02	Metro02		Metro02	Metro02	Metro02	Metro02	Metro02	Metro02	Metro02	Metro02	Metro02	Metro02	Metro02	Metro02
3			3/4_1	*1	5/4		7/4							6/8_1		
4			3/4_2											6/8_2		
5														6/8_3		

*1

4/4									
1	Metro01	11	8beat09	21	16beat09	31	Rock08	41	BigBeat2
2	Metro02	12	8beat10	22	16beat10	32	Rock09	42	House01
3	8beat01	13	16beat01	23	16beat11	33	Metal	43	House02
4	8beat02	14	16beat02	24	Rock01	34	R&R	44	Raggae
5	8beat03	15	16beat03	25	Rock02	35	Funk01	45	HipHop
6	8beat04	16	16beat04	26	Rock03	36	Funk02	46	R&B
7	8beat05	17	16beat05	27	Rock04	37	Funk03	47	Disco01
8	8beat06	18	16beat06	28	Rock05	38	Funk04	48	Disco02
9	8beat07	19	16beat07	29	Rock06	39	Funk05	49	Jazz01
10	8beat08	20	16beat08	30	Rock07	40	BigBeat1	50	Jazz02

Specifications

<Recorder section>

Number of tracks:	4 tracks × 8 virtual tracks 4 tracks simultaneous playback / 2 tracks simultaneous playback
Recording format:	16 bit MPEG1 Layer 2 compression 32 kHz
Recording time: when using 64 MB	Hi Quality = approx. 44 minutes / 1 track Standard = approx. 64 minutes / 1 track Economy = approx. 132 minutes / 1 track maximum of approx. 4200 minutes / 1 track (Economy, when using 2 G)

* Recording time may vary slightly depending on conditions of use.

Number of songs:	99 songs per card
Tempo:	40–240
Metronome types:	32
Rhythm types:	55
Track editing:	Copy, Insert, Erase, Delete, Time Expansion / Compression
Song editing:	Rename, Copy, Delete
Counter:	Min / Sec / Msec, Meas / Beat / Tick

<Mixer section>

Structure:	4 ch + 2 ch (when using sub-input function)

<Effect section>

Structure:	Guitar / Mic, Insert / Guitar+Vocal, Master, Final One of the above effects can be selected for use
Effects:	100 preset / 100 user

<Tuner>

Detection range:	27.5 Hz–2093 Hz
Calibration:	fixed at A=440 Hz

<Card>

Usable cards:	16 MB–2 GB CompactFlash

<General>

Power supply:	included AC adapter
Dimensions:	191 mm (W) × 145 mm (D) × 41 mm (H)
Weight:	415 g (without CompactFlash)

Analog / digital input / output specifications

A / D, D / A conversion:	20 bit
Sampling frequency:	32 kHz

< INPUT 1, 2>

Connector:	6.3 mm phone jack (unbalanced) XLR-3-31 type (balanced): when selecting INPUT 2 MIC

LINE

Input impedance:	22 kΩ
Rated level	–30dBu (INPUT LEVEL=Max) +4dBu (INPUT LEVEL=Min)
Maximum level	–18dBu (INPUT LEVEL=Max) +16dBu (INPUT LEVEL=Min)
Source impedance:	600Ω

MIC

Input impedance:	10 kΩ: 6.3 mm phone jack (unbalanced) 10 kΩ: XLR-3-31 type (balanced)

When using phone jack (unbalanced)

Rated level	–52dBu (INPUT LEVEL=Max) –16dBu (INPUT LEVEL=Min)
Maximum level	–40dBu (INPUT LEVEL=Max) –4dBu (INPUT LEVEL=Min)

When using INPUT 2 XLR (balanced)

Rated level	–60dBu (INPUT LEVEL=Max) –28dBu (INPUT LEVEL=Min)
Maximum level	–48dBu (INPUT LEVEL=Max) –16dBu (INPUT LEVEL=Min)
Source impedance:	600 Ω

GTR

Input impedance:	890 kΩ
Rated level	–30dBu (INPUT LEVEL=Max) +4dBu (INPUT LEVEL=Min)
Maximum level	–18dBu (INPUT LEVEL=Max) +16dBu (INPUT LEVEL=Min)
Source impedance:	600 Ω

<OUTPUT>

Connector:	RCA phono jack
Output impedance:	1 kΩ
Maximum level:	+2dBu
Rated level:	–10dBu
Load impedance:	greater than 10 kΩ

<PHONES OUTPUT>

Connector:	mini-stereo phone jack
Output impedance:	10 Ω
Maximum level:	21 mW@32 Ω

<FOOT SW>

Connector:	6.3 mm phone jack (use separately sold PS-1 foot switch)

<USB>

Connector:	type B
Supported OS:	Windows Me / 2000 or later Mac OS 9.0.4 or later

Included items

CompactFlash
AC adapter

Options

PS-1 foot switch

* Appearance and specifications are subject to change without notice for improvement.

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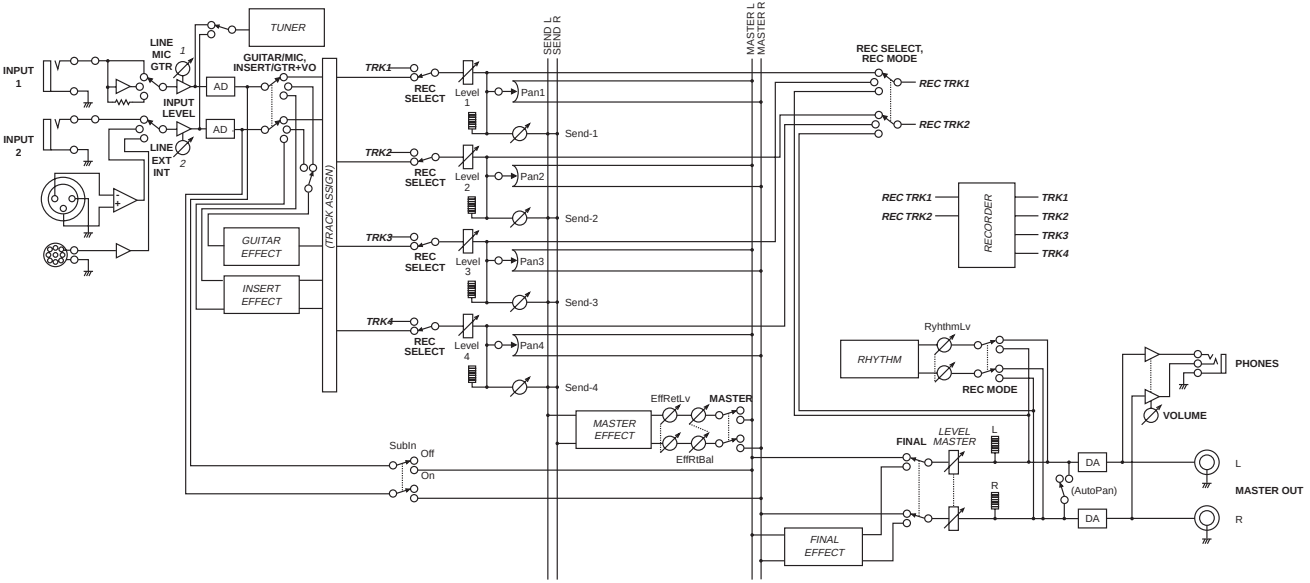

IMPORTANT NOTICE TO CONSUMERS

This product has been manufactured according to strict specifications and voltage requirements that are applicable in the country in which it is intended that this product should be used. If you have purchased this product via the internet, through mail order, and/or via a telephone sale, you must verify that this product is intended to be used in the country in which you reside.

WARNING: Use of this product in any country other than that for which it is intended could be dangerous and could invalidate the manufacturer's or distributor's warranty.

Please also retain your receipt as proof of purchase otherwise your product may be disqualified from the manufacturer's or distributor's warranty.

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